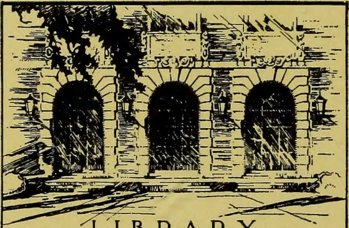

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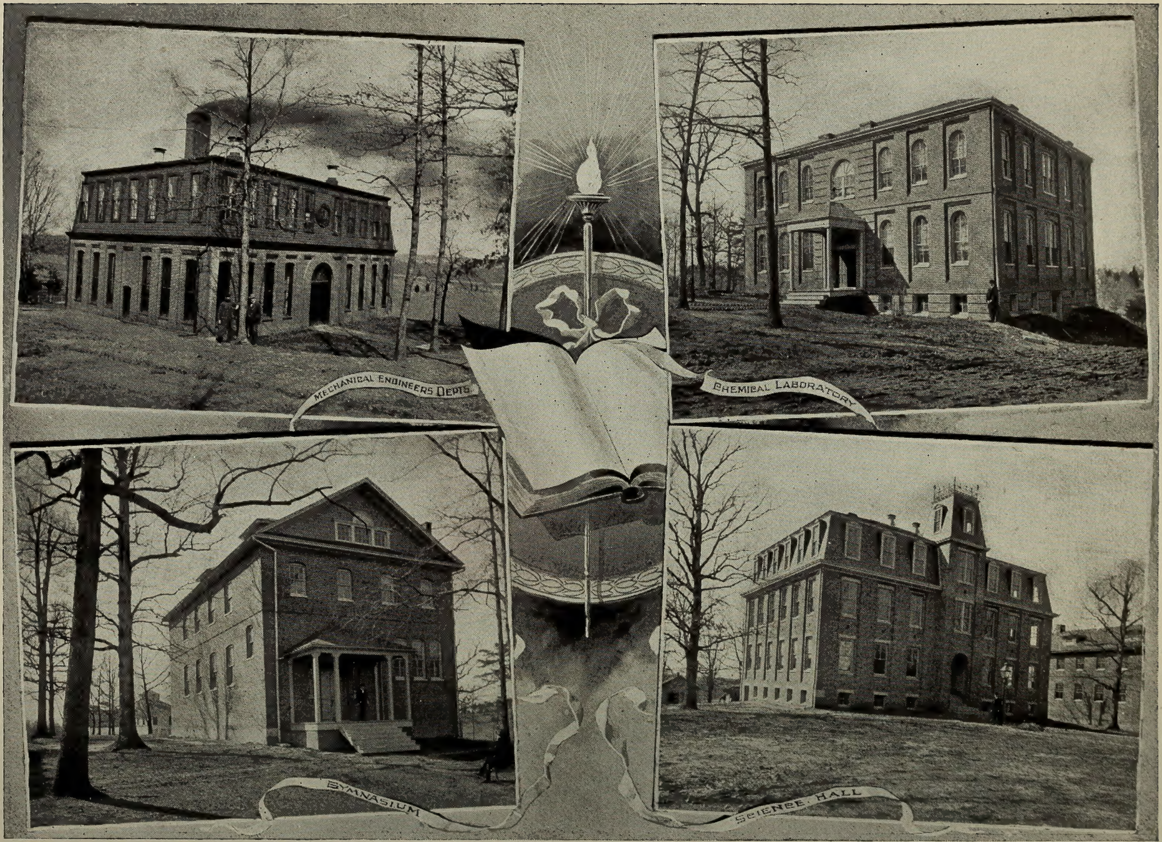
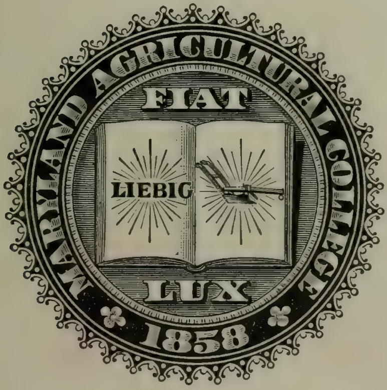


COLLEGE BUILDINGS.

THE

MARYLAND

AGRICULTURAL COLLEGE



CATALOGUE.

YEAR 1900-'01.

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*————	Professor of English and Civics.
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Harry Gwinner, M. M. E	Prof. Mechanical Engineering.
H. B. McDonnell, M. D., B. S	Prof. of Chemistry.
Henry Lanahan, A. B	Prof. Civics and Civil Engineering.
James S. Robinson	Prof. of Horticulture.
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Chas. S. Richardson,	Director of Physical Culture and Instructor in Elocution.
J. H. Mitchell, M. E	Assistant in Mechanical Engineering.
H. P. Gould, M. S	Assistant in Entomology.
G. L. Stewart, B. S	Assistant in Pathology and Botany.
J. R. Laughlin, B. S	Assistants in Chemistry (State Work).
M. N. Straughn, B. S	
J. B. Robb, B. S	
T. R. Gough, B. S	
C. G. Church, B. S	
George S. Edelen, B. S	Assistant in Chemistry (Collegiate Work).
Jos. R. Owens, M. D	Registrar and Treasurer.
W. O. Eversfield, M. D	Physician in Charge.
Miss M. L. Spence,	Typewriter and Stenographer.

*Will be supplied.

Calendar for 1900–1901.

FALL TERM.

September 20-22	Entrance Examinations.
September 24,	Monday, 9 A. M. College Work Begins.
October 12,	Friday, Meeting of the Board of Trustees.
December 21,	Fall Term Ends.
December 14,	Friday, Meeting of the Board of Trustees.
December 21, noon, January 2, noon	Christmas Holidays.

WINTER TERM.

January 2,	Winter Term Begins.
March 8,	Friday, Meeting of the Board of Trustees.
April 3,	Winter Term Ends.
April 4, noon, 9, noon	Easter Holidays.

SPRING TERM.

April 10,	Spring Term Begins.
June 1-14,	Final Examinations.
June 14,	Friday, Meeting of the Board of Trustees.
June 16,	Sunday, Baccalaureate Sermon 4 P. M.
June 17,	Class Day.
June 18,	Alumni Day.
June 19,	Commencement Day, Exercises 11 A. M.

HISTORICAL SKETCH.

As some misapprehension seems to exist in the mind of the general public as to the exact nature of the instruction offered by the Maryland Agricultural College and the function of the institution as a part of the educational system of the State, it is thought advisable at this time to make some very definite statement of the precise character of the work of the College, its *raison d'etre*, and the aims and hopes of the present administration in endeavoring to carry out to the fullest extent the ambitions and ideals of its founders. A brief account of the origin and history of the institution may serve to make clear its purpose and the scope of its work.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6th, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original college building was erected and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution; but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges were doing for the country, passed the "Land-grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part, at least, a State institution, and such it is at the present time.

In 1887 the Federal Congress passed a second important Act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland station was located on the college farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the college as to put it under a special Director, who is directly responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments, in the form of bulletins, for the information and guidance of those interested in agriculture. Since the inception of the Experiment Station, its influence has steadily increased and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

Once more, in 1892, the Federal Government came to the aid of the agricultural and mechanical colleges. By the Act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of the agricultural and mechanical colleges. The primary object of this legislation was the development of the departments of agricultural and the mechanical arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students, located at Princess Anne, on the Eastern Shore of Maryland.

During the last seven years the history of the College has been that of steady growth. This fact is evidenced by the increased numbers of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the new chemical laboratory, the mechanical engineering building, the Morrill Hall and the new college barn—as well as by the establishment of the Department of Farmers' Institutes and the Departments of State Entomology and State Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George's County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least ten trains a day, from each city, stop at College Station, thus making the place easily accessible from all parts of the State.

The telegraph station is Hyattsville, connected with the college by a private telephone line.

The college grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north, on the same road. Connection with Washington by the District and Suburban Electric Railway has recently been established.

The site of the college is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The college farm contains about three hundred acres, and is devoted to the gardens, orchards, vineyard and to general farming.

The main college building is of brick, five stories in height. It contains the students' quarters, mess hall, chapel, lecture rooms and offices. The dormitories are large, well ventilated, and provided with fire escapes and bath and water rooms. All the buildings are lighted with gas and heated with steam from central plants on the college grounds. During the past summer extensive improvements were made in the plumbing and sanitary arrangements of the building. An addition to the main building has been erected, containing commodious bath rooms on each floor, with the most modern appliances for the comfort and health of the students.

The Mechanical Engineering Department is located in a new two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for carpentry and forging, machinery rooms, a drawing room, library and office. It is a model building of its kind.

The new chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals, which work is assigned to the Professor of Chemistry at this college by an Act of the General Assembly. He is thus the State Chemist.

In 1894 the present building of the gymnasium and library was erected. The gymnasium on the ground floor is well furnished with modern athletic appliances. The library and reading room is on the second floor, and is a large, well lighted and convenient room for the purpose.

One of the most noteworthy additions to the group of college buildings is the new Morrill Hall, now completed. The building provides ample accommodations for the Departments of Agriculture, Horticulture, Biology, Physics, Entomology, Pathology and Veterinary Science, thus relieving the pressure of close quarters, from which these departments have suffered, and greatly extending their opportunities for the development of high-grade scientific work.

Another important improvement to the working facilities of the college and farm is the erection of a new and model barn. Especial attention is invited to the arrangement of this building, which is in many ways an example of an almost perfect general utility farm building.

The general appearance of the college grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower plots, and the view from the grove and campus cannot be surpassed.

The location of the college is entirely healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for nearly ten years.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State School of Science and Technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture, and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen, and the making of the man of general culture. The purpose of this college is to give to young men anxious to prepare themselves for the active duties of life, such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to the many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the college is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the government to those classes upon whom the safety and prosperity of the State so largely depend.

While the college provides, as will hereinafter be explained, several distinct courses of instruction, looking to the special training of the student in agriculture, mechanical engineering, the natural and physical sciences and belle lettres, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has been prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the college may be thus described: It begins with the student in his first, or Freshman year, a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or sophomore year, differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third or junior year, until in his last, or senior year, his work consists wholly of one or more closely connected topics in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratories and mechanical workshops, a student is able to become so proficient in his chosen line of work that when he leaves the college a career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the Public School System of Maryland. Its aim is to provide a higher education to the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the college is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools; and no efforts will be spared to make the transition from the high school or grammar school to the college a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS—EQUIPMENT AND WORK.

The following is a brief account of the equipment of the several departments of the college, and the general character of the instruction given in each.

AGRICULTURAL DEPARTMENT.

Prof. W. T. L. Taliaferro.

The Agricultural Department offers four courses—(a) a four-years' course leading to the degree of B. S.; (b) a special two-years' course; (c) a special creamery course; (d) a six-weeks' winter course.

Outline of Four Years' Course, Freshman Year:

First Session, Course I.—No. hours per week: 3 recitative, 4 practical. The general principles of agriculture, including the composition of soils and plants, the mechanical conditions of soils, elementary drainage, cultivation of the soil, plant reproduction, manures and fertilizers, rotation of crops, food and manure value of crops, farm live stock.

This course aims to give a comprehensive, though elementary knowledge of the principles and practice of agriculture, and is arranged on the basis of a minimum of theory and a maximum of facts. Gulley's "First Lessons in Agriculture" is used as a text-book, but the greater part of the work is in the fields and stables.

Second Session, Course II.—No. hours per week: 2 recitative, 3 practical. (a) Stock judging and the study of breeds of stock in detail, including history, purpose and characteristics of the principal breeds. Curtis' "Horses, Cattle, Sheep and Swine" is used as a text-book, but is combined with a critical comparative study of the College and Station live stock.

Spring crops, preparation of land for cultivation, fertilization. Text-book, Morrow & Hunt's "Soils and Crops," in connection with laboratory work and field notes on the spring work on the College and Station farms.

Sophomore Year, First Session, Course III.—No. hours per week: 2 recitative, 3 practical. (a) Fall crops, preparation of land for fertilization, planting, harvesting, conducted by text-book (Morrow & Hunt's "Soils and Crops"), laboratory work and systematic field notes; (b) the study of the physical and chemical conditions of soils in their relation to agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too strongly emphasized. The study of this important subject is conducted by means of laboratory and field work, lecture and text-book, Prof. King's ("The Soil").

Second Session, Course IV.—No. hours per week: 2 recitative, 3 practical. (a) The study of soils, continued; (b) farm drainage; practical work and text-book (Waring's "Drainage for Profit and Health"); (c) Farm machinery and cultivation of spring crops. Lecture and practice work, field notes.

Junior Year, Second Session, Course V.—No. hours per week: 2 recitative. The principles of stock breeding. The wonderful success which has attended the efforts of well-informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to, the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text-book in the course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

Senior Year, First Session, Course VI.—Hours per week: 10 (a) Stock Feeding; lectures and practical work; reference books, Henry's "Feeds and Feeding," Stewart's "Feeding Animals," Experiment Station and United States Agricultural Department bulletins; (b) Fertilizers and soil fertility; text-books, Roberts' "Fertility of the Land;" (c) Farm accounts and management; lectures and practical work.

Second Session, Course VII.—No. hours per week: 10. (a) Dairy. (b) Farm specialties, poultry, bee-keeping, forestry, etc., thesis work.

Mr. Doane.

DEPARTMENT OF MECHANICAL ENGINEERING.

Professor H. Gwinner, and J. H. Mitchell, Assistant.

FRESHMAN YEAR.

First Session..Course I.

Mechanical Drawing:—Two-hour lectures and recitations. Six hours practice in problems of projections and copying of details of machinery; the plates upon completion being enclosed in neat covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

Mr. Mitchell.

Technical Instruction:—Two hours per week. Lectures and recitations on the necessity of mechanical drawing in its relation to shop work and the explanation of the reading of drawings in connection with the finished product. The proper cutting of angles, care and adjustment of wood-working tools. Wood:—Its shrinking, warping and how to correct and prevent it. Relative strength of joints. Text-book, Goss' "Bench Work in Wood."

Mr. Mitchell.

Laboratory Work:—Six hours per week. Uses of the ordinary carpenter tools in the manufacture of ordinary joints and small tables; exercises in the principles of wood turning.

Prof. Gwinner.

Second Session..Course II.

Mechanical Drawing:—Six hours practice per week. Drawing the details of simple machines and various styles of lettering, suitable for commercial work. Text-book, Rouillion's "Mechanical Drawing."

Mr. Mitchell.

Laboratory Work:—Six hours per week. Exercises in the making of glue and doweled joints, as used in pattern making and cabinet work. Inside and outside chucking for wood turning. The making of patterns for one or more sets of machines.

Prof. Gwinner.

SOPHOMORE YEAR.

First Session..Course III.

Mechanical Drawing:—Four hours per week. Care and manipulation of drawing instruments and materials. Free-hand sketching of details of machinery and drawing to scale from these sketches. Text-book, Anthony's "Mechanical Drawing."

Mr. Mitchell.

Technical Instruction:—One hour per week. Lectures on the manufacture and management in the forge of iron and steel.

Mr. Mitchell.

Elementary Applied Mechanics:—Three hours per week. Under this branch of service is studied the transmission of power by belts and pulleys, the results of forces acting upon bodies, bolts, nuts and screws, hydraulic jack, inclined plane and the laws of friction. Text-book, Jamieson's "Applied Mechanics."

Prof. Gwinner.

Laboratory Work:—Four hours per week. Exercises in blacksmithing; which include the elementary operations of drawing out, upsetting, bending and welding of iron and the making and tempering of steel tools.

Mr. Mitchell.

Second Session..Course IV.

Mechanical Drawing:—Six hours per week. Tracing and blue printing and the representation of flat and round surfaces by ink shading. Text-book, Anthony's "Mechanical Drawing."

Mr. Mitchell.

Laboratory Work:—Six hours per week. Molding and casting in iron and management of the cupola during the process of melting and pouring off of iron.

Mr. Mitchell.

JUNIOR YEAR.

First Session..Course V.

Machine Drawing:—Four times per week. Elementary machine drawing, tracing and blue printing. Text-book, Anthony's "Machine Drawing."

Prof. Gwinner.

Laboratory Work:—Six hours per week. Elementary principles of vise and machine work, which include turning, planing, drilling, chipping and filing. This is preceded by a study of the different machines used in the machine shops.

Mr. Mitchell.

Second Session..Course VI.

Descriptive Geometry:—Three hours per week. Its relation to mechanical drawing, and solution of problems relating to magnitudes in space, bearing directly upon those mostly needed by the engineer. Text-book, Faunce's "Descriptive Geometry."

Prof. Gwinner.

Steam Engines and Boilers:—Three hours per week. The principles of the steam engine and a study of the prominent types of modern engines. The slide valve and valve diagrams. The indicator and its diagrams. Steamboilers—the various types and their advantages and the method of construction. Text-book, Jamieson's "Steam Engines," Low's "Power Catechism."

Prof. Gwinner.

Elementary Machine Design:—Four hours per week. The designing of bolts, nuts, screws and wrenches. Text-book, Low's "Introduction to Machine Drawing and Design."

Mr. Mitchell.

Laboratory Work:—Four hours per week. Continuation of elements of vise and machine work of Course V.

Mr. Mitchell.

SENIOR YEAR.

First Session..Course VII.

Machine Design:—Four hours per week. The calculation and design of pipes, riveted joints, belt and tooth gearing. Text-book, Low & Bevis' "Machine Drawing and Design."

Prof. Gwinner.

Laboratory Work:—Eight hours per week. Advanced machine work. The laying out, assembling and construction of some piece of machinery—such as an engine, lathe or dynamo.

Prof. Gwinner and Mr. Mitchell.

Second Session..Course VIII.

Testing Laboratory:—From two to four hours per week. A course in experimental engineering. The micrometer and its uses, oil testing, determining the co-efficient of friction, the calibration of the planimeter and steam gauges, slide valve setting and indicator practice.

Prof. Gwinner and Mr. Mitchell.

Engine Designing:—Six hours per week. The calculation, designing and executing the working drawings of the various parts of a well-known type of stationary steam engines.

Prof. Gwinner and Mr. Mitchell.

Laboratory Work:—Ten hours per week. Advanced machine work, being a continuation of Course VII.

Prof. Gwinner and Mr. Mitchell.

Tours of Inspection:.—The members of the Senior Class go to Baltimore or Washington, for the purpose of inspecting well-known manufacturing plants.

EQUIPMENT.

The Mechanical Engineering Laboratory is a two-story brick building, 45 feet by 60 feet, contains the carpenter, forge and foundry, and machine shops, one drafting and two lecture rooms. An annex, 25 feet by 50 feet, contains two 60-horse power boilers, which furnish steam for power, heat and experimental purposes.

The carpenter shop contains accommodations for twelve students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes and a grinding stone.

In the forge shop are nine power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smith tools for each forge. The moulding and casting is done in the same room as the forge work, and great attention is given this branch as a knowledge of the foundry work is very essential to the engineer. The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, and the necessary flasks and tools.

The machine shop contains one Reed 10-inch speed lathe, one 24-inch Gray planer, one 12-inch Reed combined foot and power lathe, a Diamond No. 4 emery tool grinder, one 14-inch Reed engine lathe, a Snyder 24-inch drill press and an assortment of vices, taps, dies, pipe tools and measuring instruments.

An 8-inch by 12-inch engine drives the machinery of the different shops. It was presented to the college by the city of Baltimore and secured through the efforts of Com. John D. Ford, of the U. S. N.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue print facilities.

DEPARTMENT OF MATHEMATICS.

PROF. R. W. SILVESTER.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our college course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry, plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering and physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

FRESHMAN YEAR.

First Session..Course I.

Number of hours per week, five. Algebra—Wentworth's complete, as far as Logarithms.

Henry T. Harrison, Professor.

Second Session..Course II.

Number of hours per week, three. Algebra—Wentworth's completed; Geometry—First three books of Wentworth's Plane Geometry.

Henry T. Harrison, Professor.

SOPHOMORE CLASS.

First Session..Course III.

Number of hours per week, four. Geometry, plane and solid, completed.

Second Session..Course IV.

Number of hours per week, five. Trigonometry, completed.

R. W. SILVESTER, Professor.

JUNIOR CLASS.

First Session..Course V.

Number of hours per week, five. Analytics, completed.

R. W. SILVESTER, Professor.

Second Session....................................Course VI.

Number of hours per week, four. Differential Calculus.
Henry Lanahan, Professor.

SENIOR CLASS.

First Session.......................................Course VII.

Integral Calculus. Henry Lanahan, Professor.

DEPARTMENT OF ENGLISH AND CIVICS.

Professor F. B. Bomberger.

This department, as its names implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English of necessity lies at the base of all other courses of instruction. A clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature (English and American), theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and thesis writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

FRESHMAN YEAR.

First Session..Course I.

All students. Five hours per week. English language, review of grammar, practical exercises in analysis and synthesis, composition and letter-writing, study of roots and affixes.

Second Session..............................Course I. (Continued)

All students. Five hours per week. English language and practice continued.

SOPHOMORE YEAR.

First Session..Course II.

Classical, Scientific and Mechanical students. Four hours per week. Principles and practice of Rhetoric.

First Session.......................................Course III.

All students. One hour per week. Practical thesis work.

Second Session.....................................Course IV.

Classical and Mechanical students. Three hours per week. Principles and practice of Logic.

Second Session.........................Course III. (Continued.)

All students. One hour per week. Practical thesis work.

JUNIOR YEAR.

First Session..Course V.

Classical students only. Three hours per week. English literature. Text-book, lectures and readings.

First Session...........................Course III. (Continued.)

All students. One hour per week. Practical thesis work.

Second Session.....................................Course VI.

Classical students only. Three hours per week. American literature. Text-book, lectures and readings.

Second Session.........................Course III. (Continued.)

All students. One hour per week. Practical thesis work.

SENIOR YEAR.

First Session....................................Course VII.

Classical students only. Three hours per week. Critical study of English classics.

First Session..................................Course VIII.

Classical students only. Three hours per week. Principles of Psychology. Text-book and lectures.

First Session..........................Course III. (Continued.)

All students. One hour per week. Practical thesis work.

Second Session.......................Course VII. (Continued.)

Classical students only. Three hours per week. Critical study of English classics.

Second Session.....................Course VIII. (Continued.)

Classical students only. Three hours per week. Principles ot Psychology. Text-book and lectures.

Second Session.........................Course III. (Continued.)

All students. One hour per week. Practical thesis work.

HISTORY AND CIVICS COURSES.

FRESHMAN YEAR.

Prof. F. B. Bomberger.

First Session......................................Course I.

Classical students only. Four hours per week. Outlines of ancient history. Text-book and lectures.

Second Session...........................Course I. (Continued.)

Classical students only. Course continued. Four hours per week.

SOPHOMORE YEAR.

First Session..Course II.

Classical students only. Three hours per week. Outlines of medieval and modern history. Text-book and lectures.

Second Session..........................Course II. (Continued.)

Three hours per week.

JUNIOR YEAR.

First Session......................................Course III.

Civil government in the United States. Two hours per week. Classical, chemical, biological and mechanical students.

Second Session.........................Course III. (Continued.)

Two hours per week.

SENIOR YEAR.

First Session.......................................Course IV.

Classical students only. Three hours per week. Principles of political economy.

First Session..Course V.

All students. One hour per week. Lectures on constitutional law.

Second Session.....................................Course IV.

Classical students (Continued). Three hours per week.

Second Session.....................................Course VI.

All students except classical. Three hours per week. Economic science and current problems.

Second Session....................................Course VII.

All students. One hour per week. Lectures on business law.

DEPARTMENT OF CHEMISTRY.

Prof. H. B. McDonnell. G. S. Edelen, Assistant.

The Chemical Department occupies the new chemical laboratory building, a substantial and commodious brick structure, which is located about 100 yards north of the main building. It contains, on the first floor, a lecture room, preparation room, office, and two laboratories, with communicating balance room, which are used for State work. On the second floor are the students' laboratories, one for each class, a supply room and students' balance room. The department has a reference library of standard works, which is being gradually increased. The equipment of the laboratory is unusually full and complete.

Instruction in chemistry is both theoretical and practical. Each student is assigned to a laboratory desk, which is provided with gas and water connections, and an outfit of chemicals and apparatus, for which he is held responsible, being charged for apparatus broken. This charge has averaged less than one dollar per year for Sophomores, and less than two dollars per year for Juniors and Seniors.

Students making a specialty of chemistry are allowed to use the laboratories at any time between the hours of 8 A. M. and 5 P. M., and are encouraged to devote more time to practical work than is called for by the schedule. Such students have, invariably, been able to secure positions after graduation.

The outline of the course, with names of text-books used and the number of hours per week, is as follows:

SOPHOMORE YEAR.

First Session.......................................Course I.

"Introduction to the Study of Chemistry," Remsen's; recitative 4; practical, 3.

Second Session.......................................Course I.

The same as first session; recitative, 3; practical, 5;

JUNIOR YEAR.

First Session.......................................Course II.

"Qualitative Analysis," Mason's; recitative, 2; practical, 6; "Determinative Mineralogy," Brush's; recitative, 2; practical, 4.

Second Session....................................Course III.

"Advanced Chemistry," Remsen's; recitative, 4; practical, 4; "Quantitative Analysis" and "Assaying," practical, 6.

SENIOR YEAR.

First Session....................................Course IV.

"Organic Chemistry," Remsen's; recitative, 4; determination of molecular and atomic weights, organic analysis, analysis of fodder, feed stuffs, water, sugar, organic experiments, assaying, etc; practical, 10.

Second Session....................................Course V.

The work of this session will be arranged to suit the requirements of the individual student, and will consist mainly in the preparation of a thesis, involving some original research; recitative, 4; practical, 10.

POST-GRADUATE COURSES.

Advanced courses in general and technical chemistry and quantitative analysis are arranged to meet the wants of individual cases.

For graduates who have completed the five courses, as above, or their equivalent, courses are arranged leading to the degree of M. S. It is possible, by diligent application, to complete such a course in one year's work. A thesis is required.

DEPARTMENT OF PHYSICS.

Professor H. Lanahan.

The Physical lecture-room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture-room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

SOPHOMORE YEAR.

First Session....................................Course I.

Elementary Physics, three periods per week.

The course consists of lectures, recitations and experimental demonstrations by the instructor, on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "Elements of Physics."

JUNIOR YEAR.

Both Sessions...Course II.

Physics:—Four periods per week class-room work, and four periods per week laboratory work.

The course begins with a review of mechanics, after which heat, sound, electricity and magnetism, and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurements. Written reports of the work done in the laboratory are required weekly. The text-books used are "Theory of Physics," Ames, and "Manual Experiments in Physics," Ames and Bliss.

SENIOR YEAR.

Both Sessions...Course III.

More advanced work will be provided for students who have completed the preceding courses and who wish to continue the study of physics.

DEPARTMENT OF CIVIL ENGINEERING.

Professor Lanahan.

JUNIOR YEAR.

Both Sessions...Course I.

Surveying:—Two periods per week class-room work; three periods per week field practice.

The course includes the use and adjustment of engineering instruments; the methods of land surveying; the platting and computing of areas; the dividing of land; leveling, and topographical surveying. Text, Davies' "Surveying." If time permits, the methods of locating and staking out new roads will be taken up, and some attention given to road construction. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level.

SENIOR YEAR.

First Session..Course II.

Graphic Statics:—Three periods per week.

Including the theory and practice of the graphical methods of determining stresses in framed structures, particularly roof trusses; and bending moments and shears in beams. The course is based on Hoskins' Graphic Statics, and many of the problems are solved analytically as well as graphically.

Second Session...........................Course II. (Continued.)

Strength of Materials:—Three periods per week.

Treating of the elasticity and resistance of materials and construction, and the mechanics of beams, columns and shafts. The text used is Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.

DEPARTMENT OF HORTICULTURE.

Professor J. S. Robinson, H. P. Gould, Assistant.

FRESHMAN YEAR.

Second Session..Course I.

Four hours per week. Lectures and practical work,—two periods consecutive: First, Methods of propagation of plants, (a) seeds, Study of methods of germination, seeding and vitality; (b) Grafting; (c) Cuttings; (d) Layers. 2. Character of soils as best adapted to different fruits and vegetables: (a) Methods of modification of soils. 3. Preparation of soil for planting and cultivation of fruits and vegetables. 4. Manures, compost and fertilizers for fruits and vegetables. 5. Hotbeds and Cold-frames. Required preparations:—General knowledge of soils and proper soil conditions, and a general knowledge of the principles of soil fertilization, cultivation of plants and plant reproduction.

Prof. Robinson and Mr. Gould.

SOPHOMORE YEAR.

First and Second Sessions.................................Course II.

Three hours per week. Lectures and practical work, two periods consecutive. 1. Pruning—Theory and practice. (a) Orchard fruits; (b) Small fruits; (c) Vines. 2. Planting and cultivation of small fruits. 3. Production of variety. (a) Pollination; (b) Cross-breeding. 4. Practical work in the greenhouse, with familiar talks on operations performed. 5. Gathering and marketing small fruits and vegetables. Required preparation:—Knowledge of elementary Physics, and a general knowledge of farm machinery and functions of plant organs.

Prof. Robinson and Mr. Gould.

JUNIOR YEAR.

First Session...Course III.

Three hours per week. Lectures and practical work,—two periods consecutive. 1. Propagation by budding. 2. Identification of varieties of the orchard fruits. 3. Canning and preserving of fruits and vegetables. 4. Winter gardening under glass.

Prof. Robinson and Mr. Gould.

Second Session, (First Half)..............................Course IV.

Landscape gardening. Two consecutive periods per week.

The treatment of the subject is with special reference to the improvement of the home surroundings, and the use of native plants in their decoration; the making of lawns and the laying-out and construction of drives.

Mr. Gould.

Second Session, (Second Half)............................Course V.

Spraying of plants. Two consecutive periods per week. A discussion of the principles underlying the operation; and examination of the apparatus used; the preparation of insecticides and fungicides, together with practical demonstration in the field. The reference book:—Lodeman's "The Spraying of Plants."

Mr. Gould.

SENIOR YEAR.

First Session..Course VI.

Three hours per week. Two consecutive lectures. The course of instruction for this year is intended to give an opportunity for those who may desire to specialize along some particular line of horticultural work. Those selecting a particular line of work from the enumeration given will be required to conduct some special investigation in that direction, and write a thesis upon the same. 1. Orchard management; (a) Selecting location; (b) Selection of varieties; (c) Methods of planting; (d) Methods of pruning to accomplish special objects; (e) Cultivation and fertilization. 2. Small fruits and truck farming. 3. Greenhouse management; (a) Vegetables; (b) Floral. 4. Markets, foreign and domestic. 5. Storage of fruits and vegetables. 6. Transportation.

Prof. Robinson and Mr. Gould.

Second Session..............................Course VII.

Plant variation and plant breeding. Two periods per week. The fact and philosophy of variation; the effects of soil, climate, cultivation and other ameliorating influences upon plants. The crossing and hybridizing of plants and their limits; the importance of the cross and its relations to practical horticulture; breeding for a special purpose; selection, heredity, and the origin of domestic varieties.

Reference Books:—Bailey's "Survival of the Unlike," Bailey's "Plant Breeding," Darwin's "Cross and Self-Fertilization in the Vegetable Kingdom," Darwin's "Animals and Plants under Domestication."

Mr. Gould.

DEPARTMENT OF VETERINARY SCIENCE AND ZOOLOGY.

Professor Samuel S. Buckley.

SOPHOMORE YEAR.

First Session.......................................Course I.

Six hours per week for students in General Science course; four hours per week for students in Agricultural course.

Elementary Biology:—A study of the microscope and microscopic methods. The lower forms of plant and animal life. This course is obligatory for those who wish to pursue advanced work in this department, in botany or entomology.

Second Session.......................................Course II.

Two lectures and two hours laboratory work per week for students in General Science and Agricultural courses.

Comparative Anatomy and Physiology:—Special reference to the processes of nutrition. Laboratory work will consist of dissections and tests, illustrating some of the chemical changes occurring within the body. Students in the General Science course will receive one extra lecture per week.

JUNIOR YEAR.

First Session....................................Course III.

Two lectures and four hours practical work for students in the Biological and Agricultural courses.

Comparative Anatomy and Physiology:—The organs of locomotion, form and action. Disorders of nutrition and of locomotion.

Second Session..................................Course IV.

Two lectures and four hours laboratory work per week for students in Biological and Agricultural courses.

Vertebrate Zoology:—This course is adapted to the requirements of courses depending upon it, and will be largely practical.

SENIOR YEAR.

First Session......................................Course V.

Two lectures and six hours of practical work per week. Diseases and accidents; emergency treatment; the administration of medicines; means of restraint; care and management; nursing; shoeing. This course may be elected as a minor.

Second Session..................................Course VI.

Two lectures and six hours of practical work per week.

Second Session............................Course V. (Continued.)

Students electing Veterinary Science as a major subject must have completed Courses I to IV, inclusive. The course will conform to requirements of the subject of the Graduating Thesis, and must be equivalent to at least ten hours of recitative work throughout the year.

DEPARTMENT OF ENTOMOLOGY.

Prof. W. G. Johnson, H. P. Gould, Assistant.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed with a view to giving the students as broad a knowledge of the subject as is practicable in the time devoted to it. In the laboratory work especial attention is paid to the methods of investigation and to training in accurate observation and recording facts.

The work of this department is open only to Juniors and Seniors in the General Science and Agricultural Courses, unless by special permission, and must be preceded by the courses in General Practical Biology and Invertebrate Zoology in the Sophomore year.

INVERTEBRATE ZOOLOGY.

First Session...Course I.

For Juniors in Agriculture and Science—First session—two lectures and two laboratory periods of two hours each per week.

This course involves a study of representatives of the principal groups of invertebrate animals together with lectures on their structure and classification.

JUNIOR YEAR.

Second Session...Course II.

Two lectures and four laboratory hours per week.

General Course:—Lectures, two hours per week, treating of the zoological position of insects, the characteristics of the orders, suborders, and the more important families; the habits of insects with special reference to those species that are of economic importance; and the practical application of entomology, including discussion of insecticides, and of the various methods of controlling the ravages of insects injurious to agriculture. The laboratory and field work, four hours per week, includes the study and more general features of insect anatomy, the determination of general species, the collection and preservation of insects, the preparation and application of insecticides, and the mechanical construction of spraying apparatus.

Prof. Johnson and Mr. Gould.

SENIOR YEAR.

First and Second Session.................................Course II.

Hours to be arranged.

Advanced Course:—Open only to students who have completed Course I, or its equivalent. This course consists of special work in morphology, or classification, or working out the life history of insects. Students making entomology their major, will be required to devote at least ten hours per week, throughout the year, to this course; and prepare an original thesis upon the subject chosen or assigned.

Prof. Johnson and Mr. Gould.

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY.

Prof. C. O. Townsend, G. L. Stewart, Assistant.

SOPHOMORE YEAR.

First Session..Course I.

Four hours per week. Systematic Botany and Functions of Plant Organs. Mr. Stewart.

Second Session.......................................Course II.

Six hours per week. Continuation of Systematic Botany. This course must be preceded by Course I. Mr. Stewart.

BOOKS OF REFERENCE, BOTANICAL DEPARTMENT.

SOPHOMORE CLASS.

Gray's Lessons and Manual; Button and Brown, Flora of Northern U. S.; Bergen, Elements of Botany; Spalding, Introduction of Botany; Bastin, College Botany; Bessey, Botany for High Schools and Colleges; Strasburger's Manual of Vegetable Histology; Arthur, Baines and Coulter, Plant Dissection.

JUNIOR YEAR.

First Session.......................................Course III.

Two lectures and a minimum four laboratory hours per week.

Morphology and Life Histories of Cryptogams, with special attention to fungi. This course necessarily embraces advanced work in microscopical technique, including imbedding, sectioning, staining and the preparation of permanent mounts and must be preceded by Course II and a course in Practical Elementary Biology.

Prof. Townsend and Mr. Stewart.

Second Session.......................................Course IV.

Two lectures and a minimum of four hours of laboratory work per week. Morphology and Life Histories of Phanerogams, with specal attention to plants of economic importance. The work in microscopical technique will be continued during this session. This course must be preceded by Course III.

First and Second Session..............................Course II.

Prof. Townsend and Mr. Stewart.

SENIOR YEAR.

First Session.......................................Course V.

Two lectures and a minimum of six hours of laboratory work per week. Plant Physiology. This course must be preceded by Course IV, and may be elected as a minor.

Prof. Townsend and Mr. Stewart.

Second Session......................................Course VI.

Two lectures and a minimum of six hours of laboratory work per week. Plant Pathology. This course embraces a study of parasitic fungi and their relations to the higher plants in producing disease. It also includes methods in the preparation and application of fungicides. Course VI must be preceded by Course V, and must be elected as a minor, following Course V.

Prof. Townsend and Mr. Stewart.

Students electing Botany as a major subject must have had Courses I to IV, inclusive, or their equivalent, and must prepare a thesis along the line of the major work. An outline of the work and the hours will be arranged upon consultation with Prof. Townsend.

ADVANCED WORK.

Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalent. This work is designed for students who wish to specialize in Botany or in Plant Pathology, and will consist largely of original investigation. Students applying for advanced work along these lines will be expected to spend practically all of their time in this department. The subject to be investigated and an outline of the work will be arranged upon consultation with Prof. Townsend.

BOOKS OF REFERENCE.

JUNIOR CLASS.

Goebel, Outline of Classification and Special Morphology; Vines, Student Text Book of Botany; Coulter's Plant Life; Underwood, Moulds, Mildews and Mushrooms; Macbride, Slime Moulds of North America; Bennett and Murray, Cryptogamic Botany.

BOOKS OF REFERENCE.

SENIOR CLASS.

Sach's The Physiology of Plants; Vines, Physiology of Plants; Mor Dangel, Plant Physiology; Sorauer, Treatise on the Physiology of Plants; Tubuef and Smith, Diseases of Plants.

DEPARTMENT OF LANGUAGES.

Prof. Thos. H. Spence.

The Department of Languages embraces the study of three branches; Latin, French and German. All students are required to take the courses in German and French, only students of the Classical Course take Latin.

The course of study in Latin is given with two ends in view—first. to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of Sallust, Virgil, Cicero, Horace, Livy, Tacitus and Juvenal, besides other authors selected for sight reading.

On account of the large percentage of Germans in our population, a speaking knowledge of this language is very important, and especial attention is given to conversation throughout the course. After the elements of the language have been mastered, and a certain facility of translation acquired, the class is divided, and the students pursuing the Classical Course continue to translate from the works of classic German authors, while the students of the Scientific Courses are given scientific German for translation.

In French, also, after the elementary work and grammar have been completed, the students of the Classical Course and those of the Scientific Courses are separated, the first selecting translations from French literature, the scientific students work of a scientific nature.

FRESHMAN YEAR.

First Session..Course I.

Six hours per week. Grammar and composition, five hours; syntax, one hour.

Second Session.......................................Course II.

Continuation of Course I. Text-books, "Bingham's New Latin Grammar;" "Gildersleeve's New Latin Primer;" "Collor's Gate to Caesar," or "Rolfe's Viri Romae."

SOPHOMORE YEAR.

First Session.......................................Course III.

Six hours per week. Sallust's "Jugurtha," Latin prose composition.

Second Session.......................................Course IV.

Text Books:—Chase & Stuart's "Sallust's Jugurthine War," or Harper & Tolman's "Caesar's Gallic War;" Chase & Stuart's "Virgil;" Gildersleeve's "New Latin Primer."

Text Books:—First half year. Otis' "Elementary German."

JUNIOR YEAR.

First Session.......................................Course V.

Ten hours per week. Cicero's orations. Latin prose composition. German.

Second Session.......................................Course VI.

Text Books, Ten hours per week:—Allen & Greenough's "Latin Grammar;" Allen & Greenough's "Cicero;" Chase & Stuart's "Horace;" Selected Odes; Allen & Greenough's "Ovid;" Selections.

German Text Books, Second Year:—Hauff "Das Kalte Herz;" Schiller's "Der Neffe als Onkel;" Hillern "Hoher als die Kirche;" Walther's "Allgemeine Meeres Kunde;" Sybel "Die Erheburg Europas;" Selected Readings in History and Fiction.

SENIOR YEAR.

First Session.......................................Course VII.

Text Books, Eleven hours per week:—Chase & Stuart's "Livy;" Chase & Stuart's "Tacitus;" Hart-MacCleave's "Juvinal;" West's "Terence."

Second Session...Course VIII.

French Text Books, Eleven hours per week:—Whitney's "French Grammar;" Super's "French Reader;" Herdler's "Scientific French Reader;" Rougement "La France;" Fenelon "Telemaque;" Dumas' "Les Trois Mousquetaires."

PREPARATORY DEPARTMENT.

Prof. H. T. Harrison.

First Session...Course I.

Arithmetic.—Five hours per week. Wentworth's G. S. Arithmetic as far as Interest.

Algebra.—Five hours per week. Wentworth's Algebra as far as Fractions.

History.—Five hours per week. U. S. History from 1775 to the present time.

Geography.—Five hours per week. Descriptive Geography completed.

English.—Seven hours per week. Spelling, Composition, Elementary, Technical Grammar, Parsing and Analysis.

Second Session...Course II.

Arithmetic.—Five hours per week. Wentworth's G. S. Arithmetic, completed.

Algebra.—Five hours per week. Wentworth's Algebra as far as Quadratics.

History.—Three hours per week. Colonial History and review of whole of Barnes' Brief History of U. S.

English.—Five hours per week. Spelling, Composition, Letter-writing, Technical Grammar.

Geography.—Four hours per week. Maury's Physical Geography, completed.

Bookkeeping.—Four hours per week. Single entry. Business.

MILITARY DEPARTMENT.

The Military Department is a distinctive feature of the college. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor and as Commandant of cadets.

The Military Department of this college is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the three companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the college is generally military in its nature. Promotion in this department is made according to merit and record in military matters.

The practical instruction of the cadets consists of daily infantry drill, outpost duty and artillery drill. The study of tactics and lectures on military science constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the college as an educational institution in the true sense of the word.

DEPARTMENT OF PHYSICAL CULTURE.

The physical culture of the students is provided for by a regular course of instruction in the gymnasium, under the direction of a competent instructor. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the gymasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

THE COLLEGE LIBRARY.

The college library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound government reports form an important addition to the reference works of the library. Almost all the leading magazines and a large number of newspapers are subscribed for.

COURSES OF STUDY.

In order to systematize the work of the numerous departments of the college, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, four distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering, Scientific and Classical. In three of these, the Agricultural, Mechanical Engineering and Classical, a continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the classwork is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular study desired—agricultural, mechanics or the classical branches—is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientfic agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical, general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the Degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for those who have neither time nor the opportunity to take the regular four years' course. In fact, it is really designed for those actually engaged in farming, and who can spare six or eight weeks during the winter to attend lectures and to follow the practical work of the college and station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry and chemistry, horticulture, entomology, farm accounts, farm buildings, carpentry and blacksmithing, veterinary science, the principles of citizenship and the elements of business law. The nominal charge of five dollars ($5.00) is made for the course. The entire expense, including board, need not be over fifty dollars ($50.00). The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering. The course leads to the Degree of B. M. E.

The Classical Course was instituted to meet a demand on the part of the patrons of the college for a course of study which should prepare young men to enter the so-called learned professions. The course emphasizes the modern languages, Latin, mythology, English and civics and psychology, with a moderate amount of mathematics and the natural and physical sciences. The Degree of Bachelor of Arts is conferred upon its graduates.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science—chemistry, biology, pathology, entomology, veterinary science, physics, civil engineering or political science. The basis of the course is a thorough training in mathematics, English and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Junior year. In the senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups of studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

OUTLINE OF COURSES.

SENIOR CLASS.

The work for the Senior Year in Agriculture and General Science shall consist of a major subject and two or more minor subjects. This work will be elective upon consultation with the professor in charge of the major subject.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) hours recitative work, one half of which will be devoted to the major subject.

Two hours of practical work is regarded as equivalent to one of recitative work.

The work of the Senior year in the Mechanical Engineering Course is as follows:

SENIOR COURSE—MECHANICAL ENGINEERING DEPARTMENT.

First Term.		Second Term.	
French	5	French	3
Calculus	4	Strength of Materials	3
Machine Design	2-(2)	Machine Design	2-(4)
Graphic Statistics	3	Testing	(4)
Machine Construction	(8)	Machine Construction	(10)
Economics	3	Economics	3
Recitation equiv.	21	Recitation equiv.	20
Total hours	28	Total hours	28

JUNIOR CLASS.

First Term.	Physicl.	Chemical	Biological.	Mechanical.	Agricultural.
Physics	4-(4)	4-(4)	4-(4)	4-(4)	....
Anal. Geom'y	5	.....	....	5	....
German	3	3	3	3	3
Chemistry & Mineralogy	4-(4)	4 (10)	....	....	....
Surveying	2-(3)	.....	....	....	2-(3)
Drawing	(4)	.....	....	-(4)	....
Veterinary Science	....	.....	2 (4)	....	2 (4)
Inver. Zoology	....	.....	2-(4)	...	2-(4)
Botany	....	.....	2-(4)	..	2-(4)
Horticulture.	....	.....	....	....	(3)
Agriculture	....	.....	....	...	2-(2)
Eng. (Thesis)	1	1	1	1	1
Mechanics	....	....	....	(6)	...
Civics	....	2	....	2	....
Reci'n equiv.	21	21	22	22	24
Total hours	25	28	30	29	34

Second Term.	Physical.	Chemical.	Biological.	Mechanical.	Agricultural.
Physics	4-(6)	4-(4)	4-(4)	4-(4)	....
Diff. Calculus	4	.....	....	4	....
German	3	3	3	....	3
Chemistry & Mineralogy.	4-(4)	4-(10)	....	...	....
Surveying	2 (3)	.....	....	...	2-(3)
Drawing	(4)	.....	....	-(4)	....
Gen. Zoology	....	....	2-(4)	....	2-(4)
Entomology	....	.....	2-(4)	...	2 (4)
Botany	....	.....	2-(4)	...	2 (4)
Des. Geom'ry	....	.....	...	3	
Agriculture	....	.....	...	....	3-(3)
Eng. (Thesis)	1	1	1	1	1
Theory of Steam Engine	....	.....	....	3	....
Mechanics	....	...	....	-(6)	....
Reci'n equiv.	21	21	21	21	24
Total hours	26	26	30	28	33

NOTE—Students in Phyics may elect Chemistry 4-(4) throughout the year or Drawing 4 and Surveying 2-(3) throughout the year.

SOPHOMORE CLASS.

First Term.	General Science.	Mechanical.	Agricultural.	Second Term.	General Science.	Mechanical.	Agricultural.
Agriculture.......	......	......	3 (4)	Agriculture........	......	......	2 (3)
Mechanics	......	(4)	(4)	Horticulture	......	......	1 (2)
Element'ry Biol'y	6	......	(4)	Comparative Anatomy and Phys'l'y	3 (2)	......	2 (2)
Botany...........	(4)	......	(4)	Botany............	(4)	......	(4)
Physics	3	3	3	Chemistry.........	4 (3)	4 (3)	4 (3)
Chemistry........	4 (3)	4 (3)	4 (3)	Geometry & Trigonometry.......	5	5	5
Geometry.... ..	4	4	4	Drawing.....	......	(6)	......
Drawing	......	(4)	......	Moulding & Casting.............	......	(6)	......
Theoretical Mechanics.........	.....	3	......	German...........	3	3	3
English (Rhetoric)	4	4	1	English (Logic)....	......	3	......
			......				
Recitation equiv.	21½	23½	24½	Recitation equiv.	20½	22½	24
Total hours....	28	28	34	Total Hours.....	26	28	31

NOTE.—Students in General Science wishing to take the Physical or Chemical course may elect an equivalent for Botany upon approval of the head of the Department of Physics and Chemistry, as the case may be.

FRESHMAN CLASS.

First Term.	General Science.	Mechanical.	Agricultural.	Second Term.	General Science.	Mechanical.	Agricultural.
Agriculture	3 (4)	......	3 (4)	Horticulture	(4)		(4)
Drawing.........	(4)	(8)	(4)	Drawing..........	(4)	(6)	
Algebra..........	5	(5)	5	Algebra..........	3	3	3
English	5	5	5	English....	5	5	5
Wood work......		(6)	(4)	Geology..........	3	3	3
Elem. Ap. Mech..		3		Wood-work.......		(6)	
				Geometry.	5	5	5
				Agriculture.......			2 (3)
Recitation equiv..	20	20	22	Recitation equiv.	20	22	21½
Total hours....	24	25	28	Total hours....	24	26	25

OUTLINE OF CLASSICAL COURSE.

FRESHMAN YEAR.		SOPHOMORE YEAR.	
First Term.	Second Term.	First Term.	Second Term.
English.........5	English.........5	Rhetoric.........4	Logic........... 3
History......... 4	History..........4	Latin. 6	Latin............6
Latin............6	Latin............6	Geometry.......4	German.........3
Algebra.........5	Algebra.........3	Physics......... 3	Trigonometry...5
—	Geometry.......5	Chem. 4 3. .... 5½	Chemistry 4 3..5½
Total 20	—	—	—
	Total 23	Total 22½	Total 22½

JUNIOR YEAR.		SENIOR YEAR.	
First Term.	Second Term.	First Term.	Second Term.
English Lit......3	American Lit....3	English......... 2	English..........2
Civil Gov...... ..4	Civil Gov.........4	Psychology......2	Psychology......2
Latin............6	Latin............6	Business Law...1	Business Law...1
German.........4	German.........4	Economics......3	Economics......3
Surveying..2-3 3½	Surveying..2-3..3½	Latin............6	Latin............6
—	—	French..........5	French..........5
Total 18½	Total 18½	—	—
		Total 19	Total 19

REQUIREMENTS FOR ADMISSION.

For admission to the college department—Freshman class—an entrance examination is required. This examination will be held at the college on September 20th, 21st, 22nd, 1900. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic (complete), algebra (as far as quadratics), political and physical geography. A mark of 70 per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic (as far as percentage), United States history and political geography.

Every applicant for admission to the college must bring satisfactory testimonials as to character and previous scholarship, from one or more persons qualified so to speak—his former teacher, pastor or neighbor, acquainted with his general reputation. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the college for promotion to such classes, or must present certificates from county or city schools covering the work of the lower college classes.

PROMOTION.

In order to pass from one class to the next higher class a student is required to pass the yearly examination by a mark of at least 60 per cent .in each study, and to have a combined mark in each branch (daily and examination) of at least 70 per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year.

It has been found necessary to make some regulations to provide for cases of using unfair means in examinations. The faculty, therefore, has agreed upon the following rule, which will be rigidly adhered to: "Any student detected in so doing will be required to surrender his papers, and will not under any circumstances be given another examination in that particular study."

SCHOLARSHIPS.

The college offers a number of scholarships—three for Baltimore City and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City and in the counties by the County Examiner. All scholarship students must be prepared for entrance to the Freshman class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the college. It is then again open for competition. The cost per year for scholarship students will be found under the head of student expenses.

The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present them-"selves at the college, or other designated place, at the date which "may be named, in the September or January next following the "award, and be examined by college authorities for entrance to the "Freshman class. Alternates are to be thus examined, as well as prin-"cipals, and in a case of a failure of the principal to secure or hold the "scholarship, the alternate will have the first right to the place, if with-"in a year from date of the certificate of award.

"Persons holding certificates of scholarship, must, in order to se-"cure the same, pass the entrance examination of the college, and (if "entering in January) such other examination as may be required to "join *the Freshman class*. Every one must declare his intention of "completing the prescribed course of study of the college, in either "Agriculture or Mechanical Engineering, provided he retains his "Scholarship, and must make an advance payment of $15 on the year's "account. And to hold a scholarship, the student must make the sub-"sequent payments and meet such requirements of the college as to "scholarship and deportment, as may be prescribed by the President "and faculty. By passing special examinations, candidates for scholar-"ships may be permitted to enter the Sophomore class."

DISCIPLINE AND REGULATIONS.

The discipline of the college, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of cadets. The final authority, however, in all cases, is the President of the college.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be truthful under all circumstances. Upon entrance each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of these rules is then given him, and he is held responsible for all acts in disregard thereof. Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the key-note of student government. Failure in duty means necessarily forfeiture of confidence and trust.

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offences the punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

Frequent absences from the college are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the college.

Three reports are sent to each parent during the year, showing the student's progress in class work and his general standing as to conduct, etc. At the end of the year a detailed report of the year's work is made.

STUDENT ORGANIZATIONS.

Student clubs for social, literary and athletic purposes, are encouraged as means of creating class and college pride and increasing an *esprit de corps* among the students. Each has its own organization in which matters relating to class work are discussed and directed. Officers are elected, and the unity of the class is strictly preserved. This has been found to be a decided aid to discipline, and tends to raise the standard of student honor.

Among the successful student societies are the Mercer Literary Society and the Morrill Literary Society which have accomplished much good during the past year, the M. A. C. Athletic Association, which controls and directs the work of the College Athletic Team, the Rossburg Club, a social organization, the Glee Club, the Mandolin Club, and the Cadet's Annual, an organization of the Senior class, which publishes an annual magazine. The first four numbers of this Annual, "The Reveille" for 1896-'97, 1897-'98, 1898-'99 and 1999-'00, are most creditable publications.

STUDENT EXPENSES.

The expenses of the college year for the several classes of students are as follows:

REGULAR STUDENTS.

Board, heat, light, room and books	$150.00
Laboratory fee	6.00
Physician's fee	4.00
Breakage fee	5.00
Total cost	$165.00

SCHOLARSHIP STUDENTS.

Board, heat, light, room and books	$70.00
Laboratory fee	6.00
Physician's fee	4.00
Breakage fee	5.00
Total cost	$85.00

DAY STUDENTS.

Room, heat and books	$24.00
Laboratory fee	6.00
Breakage fee	5.00
Total cost	$35.00

TIME OF PAYMENT.

For Regular Students.—

$40.00 (and the fees) on entrance: $40.00 on November 15th; $40.00 on February 1st; $30.00 on April 1st.

For Scholarship Students.—

$35.00, (and the fees) on entrance; $35.00 on February 1st.

For Day Students:—

$12.00 (and the fees) on entrance, and $12.00 on February 1st.

Promptness in payment is insisted upon.

EXPLANATION OF FEES.

The laboratory fee is intended to cover the cost of the materials and apparatus consumed by the student in practical laboratory work.

The physician's fee is to provide for the attendance of the regular college physician in all ordinary cases of sickness.

The breakage fee is to cover all losses to the college caused by careless breakage or otherwise by the students. Each loss is divided proportionately among the students, and the unused balance of each fee refunded at the close of the year. In case the loss is known to be caused by any particular student, the whole amount is charged to his account.

Except in cases of extended illness, no money will be refunded for long continued absence or withdrawal from the college.

Students entering late in the session will be charged according to the date of entrance.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park Store on arrival:

1 dozen white collars, uniform.
6 pair white gloves, uniform.
6 pair white cuffs, uniform.
1 pair blankets (for single bed.)
3 pair sheets (for single bed.)
4 pillow cases.
2 blue bed-spreads, uniform.
6 towels.
1 chair, uniform.

The room-mates together purchase the following articles:—

1 set of lamp fixtures, uniform.
1 pitcher and basin, uniform.
2 table-cloths, uniform.
1 broom.
1 looking-glass.
1 slop-jar (porcelain.)

All the articles marked uniform in the foregoing list can best be purchased after the student arrives at the college. The cost of the entire list should not be more than $10.00 for the year.

UNIFORM.

The cadet uniform of substantial grey cloth, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the college, and the fit is guaranteed. The cost of the entire outfit,—coat, trousers and cap, is $16.00. Parties coming through Baltimore can leave measures and orders with the New York Clothing House, 102-104 E. Baltimore Street. Payment must be made for this at time of entrance. This is imperative.

For further particulars as to entrance, examination, expenses, etc., address:

R. W. SILVESTER, President,
Maryland Agricultural College,
College Park, Maryland.

Express Office, College Station, B. & O. R. R. Telegraph Office, Hyattsville, Md., Telephone Station, Hyattsville, Md.

THE ALUMNI ASSOCIATION.

The growth of the Alumni Association during the past year, is a source of great satisfaction to the officers of the College and of the Association. Through the efforts of its officers a banquet was held at the College in April this year. Renewed interest was shown by the existing members of the Association and the occasion was marked by a large increase in the membership, recruited largely from the older graduates of the College.

All indications point to a great advance in the growth of the organization. And now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. At its regular annual meeting in June, it was decided that the Association would continue its offer of medals for proficiency in three of the departments of College work. By restricting the competition for the medal to be awarded for the best paper on "Agricultural Science" to those students pursuing original research, it is intended and hoped, by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

It will be a source of gratification to the members of the Association to note the action of the Board of Trustees of the College with reference to the holding of scholarships in the College. One year ago the Association passed a resolution looking to the restriction of the holders of the State Scholarships to the Agricultural and Mechanical courses in the College. This was with the idea of carrying out more completely the ideas of the founders of the College, in establishing a school for instruction in Agriculture and the Mechanic Art. At the last meeting of the Board of Trustees an order was passed putting the restriction in full operation. It is along this and similar lines that the Association has a broad field provided in which to exert its efforts; and as it increases in strength, it may be expected to make its influence felt for the advancement of the interest and welfare of the College.

The officers of the Association for the ensuing year are:--President, F. B. Bomberger, '94; Vice-President, J. Enos Roy, '92; Secretary-Treasurer, J. R. Laughlin, '96, members-at-large of the Executive Committee, F. A. Soper, '67 and A. S. Gill, '97.

Graduates and members of the Association are requested to keep the Secretary-Treasurer informed of any changes in their addresses. Any information concerning the older graduates, which will enable the officers to locate and communicate with them, will facilitate their efforts and will tend to further the success of the Association.

Address of the Secretary-Treasurer:—J. R. Laughlin,
College Park, Md.

LETTER FROM DEPARTMENT OF AGRICULTURE.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving a compensation which will enable them to pay all expenses. This offer, on the part of the Department of Agriculture, is greatly appreciated, and will, no doubt, be availed of by many attending the Land-Grant Colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:

"Department of Agriculture, Washington, D. C.,

"June 27th, 1899.

"Dear Sir:—

"In my annual report to the President for 1898, I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post-graduate studies in connection with work in the scientific division of this Department, as far as practicable. In pursuance of this policy, I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as "Scientific Aids" on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support, in the preparation of their graduates for posts of usefulness in this Department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope, therefore, that the effort which I am now making in this direction will be but a beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high grade scientific work. It will, of course, be understood that under present conditions the Department can only admit a very limited number of scientific aids. Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualifications for aiding in the work of the Department now in progress. In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission.

"Very respectfully,

"JAMES WILSON,

"Secretary Agriculture."

To R. W. Silvester, President, College Park, Maryland.

SCIENTIFIC AID.

DEPARTMENT OF AGRICULTURE.

AUGUST 1st, 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of scientific aid, Department of Agriculture.

The examination will consist of the subjects mentioned below, which will be weighted as follows:—

Subjects.	Weights.
1. College Course with Bachelor's Degree	50
2. Post-graduate course and special qualifications	25
3. Thesis or other literature	25
Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commission prior to the hour of closing business, on August 1st, 1900, their statements and other material which will be required as specified in a special form which will be furnished them by the Commission, together with application blank (Form 304) in order to have their names entered upon the register which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to August 1st, 1900, may file them at any subsequent time, when they will be rated and the names of those attaining eligible averages will be entered upon the register.

For the information of applicants, the following statement is made, as received from the Secretary of Agriculture:

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.

2. Each applicant must file with the United States Civil Service Commission, Washington, D. C., a properly certified statement as to the length of time spent in College, the studies pursued, the standing in these studies, the special work it is desired to take up and the special qualifications for such work, and finally, a thesis upon such scientific subjects as the applicant may select, or in lieu of this, any literature on scientific subjects over his own signature.

3. The length of time any scientfic aid may serve in the Department is limited to two (2) years.

4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified, without regard to any consideration, save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blanks (Form 304) and special forms.

DONATIONS TO LIBRARY.

Grateful acknowledgment is made to the following, for valuable additions to our library:

The late William S. Keech, of Towson, Md., complete set of literature on all matters pertaining to Arctic Explorations.

Johns Hopkins University, Baltimore, Md., additions to Agricultural Library, and Reports of Geological Survey, Weather Service and Highway Commission.

Department of Agriculture, Washington, D. C., additions to Agricultural Library.

Hon. A. P. Gorman, Various publications of a fiscal character.

Hon. Sydney E. Mudd, Maps for Engineering Department.

County Press, valuable additions of their publications.

MEDALS AWARDED.

COMMENCEMENT, 1900.

Senior Class, Trustee's Medal......................H. J. Kefauver.
Gold Medal for Highest Standing for entire Course.
Junior Class, Trustee's Medal........................W. W. Cobey.
Gold Medal for Highest Standing in Junior Class.
Alumni Medal...................................E. S. Choate.
Gold Medal for Excellence in Mechanical Engineering.
Alumni Medal...................................A. E. Ewens.
Gold Medal for Best Essay on Agricultural Science.
Alumni Medal.................................H. J. Kefauver.
Gold Medal for Best Debater in Competitive Debate.
Trustee's Medal...............................H. J. Kefauver.
Gold Medal for Best Essay on "American Citizenship."

ATHLETIC MEDALS.

100 Yard Dash	Matthews.
220 Yard Dash	Weigand.
440 Yard Dash	Weigand.
Half Mile Run	Dickey.
Mile Run	Dickey.
120 Yard Hurdle	Mackall.
Class Relay won by	Senior Class Team.
Putting 16-lb. Shot	Peters.
High Jump	J. H. Hopkins.
Broad Jump	Peters.
Best Tennis Player	Fendall.

GRADUATES OF 1900 AND DEGREES CONFERRED.

SUBJEST OF THESES.

Edward S. Choate, M. E,........................Randallstown, Md.
"Wood Turning Lathe."

Calvin Grant Church, B. S,........................College Park, Md.
"Comparative Analysis of Oyster Shells and Oyster Shell Lime."

Arthur Edward Ewens, B. S,........................Baltimore, Md.
"The Analysis of Butter and Oleomargarine."

Andrew S. R. Grason, B. S,..........................Towson, Md.
"Horse Industry."

William D. Groff, B. S,............................Owings Mills, Md.
"Condimental Foods."

R. Moore Jenifer, B. S,............................Loch Raven, Md.
"Minor Injuries and Their Treatment."

Harry J. Kefauver, A. B,............................Frederick, Md.
"The Effect of Material Progress Upon the Distribution of Wealth."

Samuel M. Peach, A. B,..........................Mitchellville, Md.
"Trusts."

Earl Neilson Sappington, B. S,.....................Darlington, Md.
"The Urinary System."

Amos C. Sudler, B. S,..............................Westover, Md.
"The Stable and Its Management."

William Henry Talbott, A. B,..........................Willows, Md.
"Our Public School System."

William Henry Weigand, B. S,....................Leitersburg, Md.
"Comparative Analysis of Coal Gas and Water Gas Lime."

MILITARY DEPARTMENT ROSTER.

COMMANDANT,

*————————————————

CADET BATTALION.

STAFF.

Major, W. W. Cobey.

*———— ....First Lieutenant and Adjutant.
*———— ....First Lieutenant and Quartermaster.
F. H. Peters,.................................Sergeant-Major.
W. S. Hull,...................................Chief Trumpeter.

INFANTRY.

COMPANY "A."	COMPANY "B."	COMPANY "C."
	CAPTAINS.	
H. C. Whiteford.	A. R. Nininger,	F. B. Hines.
	FIRST LIEUTENANTS.	
J. T. Hardesty,	F. V. McDonnell,	*......................
	SECOND LIEUTENANTS.	
J. D. Bowman,	T. B. Symons,	*......................
	FIRST SERGEANTS.	
S. P. Darby,	R. L. Mitchell,	L. E. Mackall.
	SERGEANTS.	
Jos. Coudon,	E. H. Smith,	W. S. Fendall.
R. Hamblin,	W. B. Woolf,	J. I. Wisner.
	CORPORALS.	
B. W. Gatch,	L. M. Ewell,	J. H. Hopkins.
E. D. Dickey,	R. Darby,	J. B. Robins.
E. P. Walls.	C. Clagett,	W. C. Ort.

*Will be appointed.

ROSTER OF STUDENTS.

SESSION 1899-1900.

SENIOR CLASS.

Choate, E. S.	Randallstown, Md.
Church, C. G.	College Park, Md.
Ewens, A. E.	Baltimore, Md.
Grason, A. S. R.	Towson, Md.
Groff, W. D.	Owings, Mills, Md.
Jenifer, R. M.	Loch Raven, Md.
Kefauver, H. J.	Frederick, Md.
Peach, S. M.	Mitchellsville, Md.
Sappington, E. N.	Darlington, Md.
Sudler, A. C.	Westover, Md.
Talbott, W. H.	Willows, Md.
Weigand, W. H.	Leitersburg, Md.

Total 12.

JUNIOR CLASS.

Cobey, W. W.	Grayton, Md.
Hardesty, J. T.	Collington, Md.
Nininger, A. R.	Huntsville, Ala.
Peyton, J. I.	Washington, D. C.
Hines, F. B.	Chestertown, Md.
McDonnell, F. V.	Florence, Pa.
Whiteford, H. C.	Whitefords, Md.

Total 7.

SOPHOMORE CLASS.

Bowman, J. D.	Hyattstown, Md.
Bradley, J. A.	Chestertown, Md.
Branham, H. C.	Baltimore, Md.
Coudon, Jos.	Perryville, Md.
Carroll, D. G.	Baltimore, Md.
Darby, R. J.	Buck Lodge, Md.
Darby, S. Porter.	Sellman, Md.
Fendall, W. S.	Towson, Md.
Gideon, C. C.	Ballston, Va.
Jenifer, D.	Loch Raven, Md.
Lansdale, H. N.	Damascus, Md.
Mackall, L. E.	Mackall, Md.
Mitchell, R. L.	La Plata, Md.

SOPHOMORE CLASS (Continued.)

Peters, F. H.	Wesley, Md.
Posey, A. A.	Faulkner, Md.
Robertson, M. G.	Washington, D. C.
Symons, T. B.	Easton, Md.
Welsh, G. P.	Washington, D. C.
Woolf, W. B.	Hyattsville, Md.
Wisner, J. I.	Baltimore, Md.

Total 20.

FRESHMAN CLASS.

Byers, J. B.	Ellicott City, Md.
Cairnes, G. W.	Jarrettsville, Md.
Clagett, C.	Potomac, Md.
Clagett, R. D.	Upper Marlboro, Md
Cooke, S.	Hyattsville, Md.
Collier, J. P.	Ellicott City, Md.
Cruikshank, T.	Cecilton, Md.
Curtis, J. D.	Sligo, Md.
Dickey, E. D.	Baltimore, Md.
Elgin, B.	Brunswick, Md.
Ensor, J. G.	Belfast, Md.
Ewell, L. M.	Baltimore, Md.
Fitzhugh, A. C.	Baltimore, Md.
Garner, E. F.	Rosaryville, Md.
Gatch, B. W.	Gardenville, Md.
Hamilton, M. P.	Baltimore, Md.
Hamblin, R.	Wango, Md.
Hopkins, J. H.	Elkridge, Md.
Hopkins, I. C.	Halls, Md.
Hinman, W. G.	Lower Marlboro, Md.
Loker, H.	Leonardtown, Md.
Matthews, J. M.	Dulaneys Valley, Md.
Merryman, T. C.	Monkton, Md.
McCubbin, L. C.	Chevy Chase, Md.
Mayo, R. B.	Hyattsville, Md.
Owens, E. T.	Greenock, Md.
Ort, W. C.	Barton, Md.
Parker, R. A.	Piscataway, Md.
Peach, P. L.	Mitchellsville, Md.
Purman, Stanley	Washington, D. C.
Reading, F. M.	Darnestown, Md.
Robins, J. B.	Snow Hill, Md.
Ray A. A.	Chillum, Md.

FRESHMAN CLASS (Continued.)

Smith, E. H.	Govanstown, Md.
Sozinskey, T. S.	Millington, Md.
Spalding, D. B.	Washington, D. C.
Sadtler, G. T.	Baltimore, Md.
Walls, E. P.	Barclay, Md.
Warren, G. L.	Brooklyn, N. Y.
Young. F. J.	Bristol, Tenn.

Total 40.

PREPARATORY CLASS.

Bryan, T. E.	Centerville, Md.
Broch, Leon	Cuba.
Brown, D. E.	College Park, Md.
Caldwell, E. A.	Washington, D. C.
Carroll, W. C.	College Park, Md.
Cockey, J. G.	Gwynnbrook, Md.
Coombe, O. P.	Washington, D. C.
Carr, M.	Hyattsville, Md.
Eversfield, O. C.	College Park, Md.
Ewell, E. R.	Baltimore, Md.
Fenby, W. W.	Avondale, Md.
Gathmann, O.	Washington, D. C.
Gathmann, P.	Washington, D. C.
Gourley, T. A.	Burch, Md.
Hull, W. S.	Baltimore, Md.
Hall, A. L.	Allegheny, Pa.
Harr, A. G.	Forest Glen, Md.
Heller, H. C.	Baltimore, Md.
Irby, R. G.	Washington, D. C.
Kehoe, J. G. C.	Washington, D. C.
Lee, J. B.	Hyattsville, Md.
Myers, J. T.	Avenel, Md.
Maught, A. R. B.	Broad Run, Md.
Meikle, R. J.	Baltimore, Md.
Motter, W. R.	Taneytown, Md.
Masvidal, P.	Cuba.
Nayler, R. B.	Piscataway, Md.
Nichols, S. B.	Germantown, Md.
Purnell, J. R.	Snow Hill, Md.
Payne, T.	Frostburg, Md.
Rollins, W. W.	Seat Pleasants, Md.
Rollins, P. C.	Seat Pleasants, Md.
Reasin, W. F.	Havre de Grace, Md.
Rolph, W. C.	Beltsville, Md.

PREPARATORY CLASS (Continued.)

Sappington, J. W.	Overton, Md.
Shepherd, E. L.	Bristol, Md.
Smith, D. R.	Frederick, Md.
Sincell, G. L.	Oakland, Md.
Underwood, E. J.	Accokeek, Md.
Watts, H. D.	Bel Air, Md.
Winterson, C. R.	Elkridge, Md.

Total 41.

SPECIALS.

Darby, S. P.	Sellman, Md.
Brown, D. E.	College Park, Md.
Flickinger, M. F.	Copperville, Md.
Reaver, E. C.	Trevanion, Md.
Hiner, E. O.	Westminster, Md.

Total in all Classes 125.

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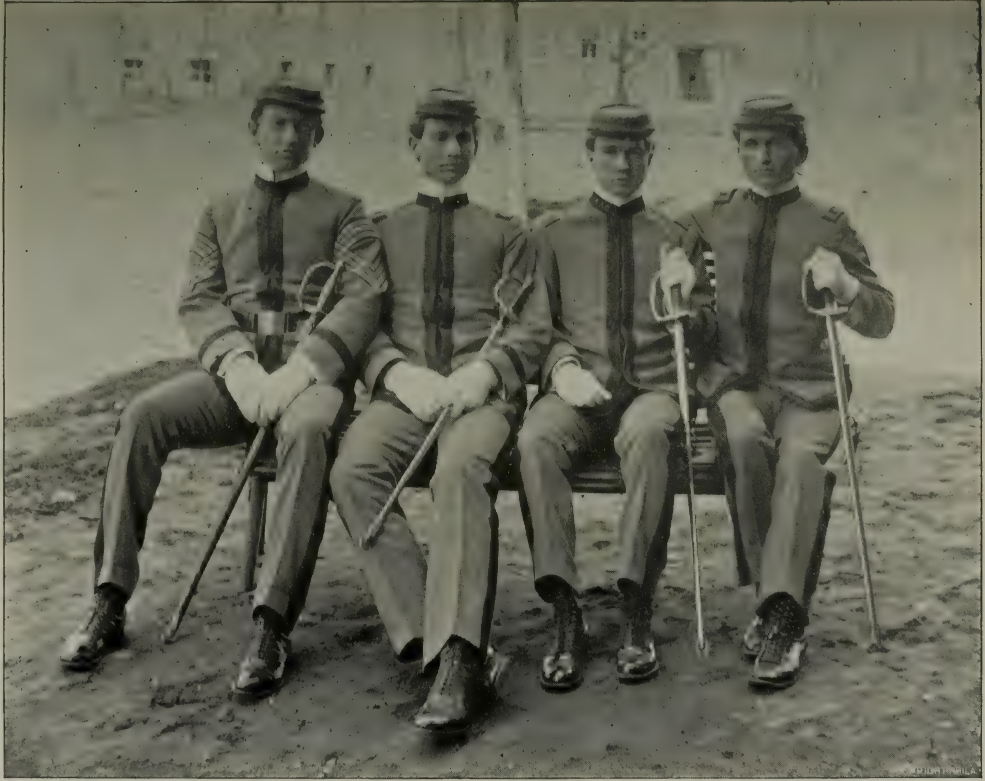
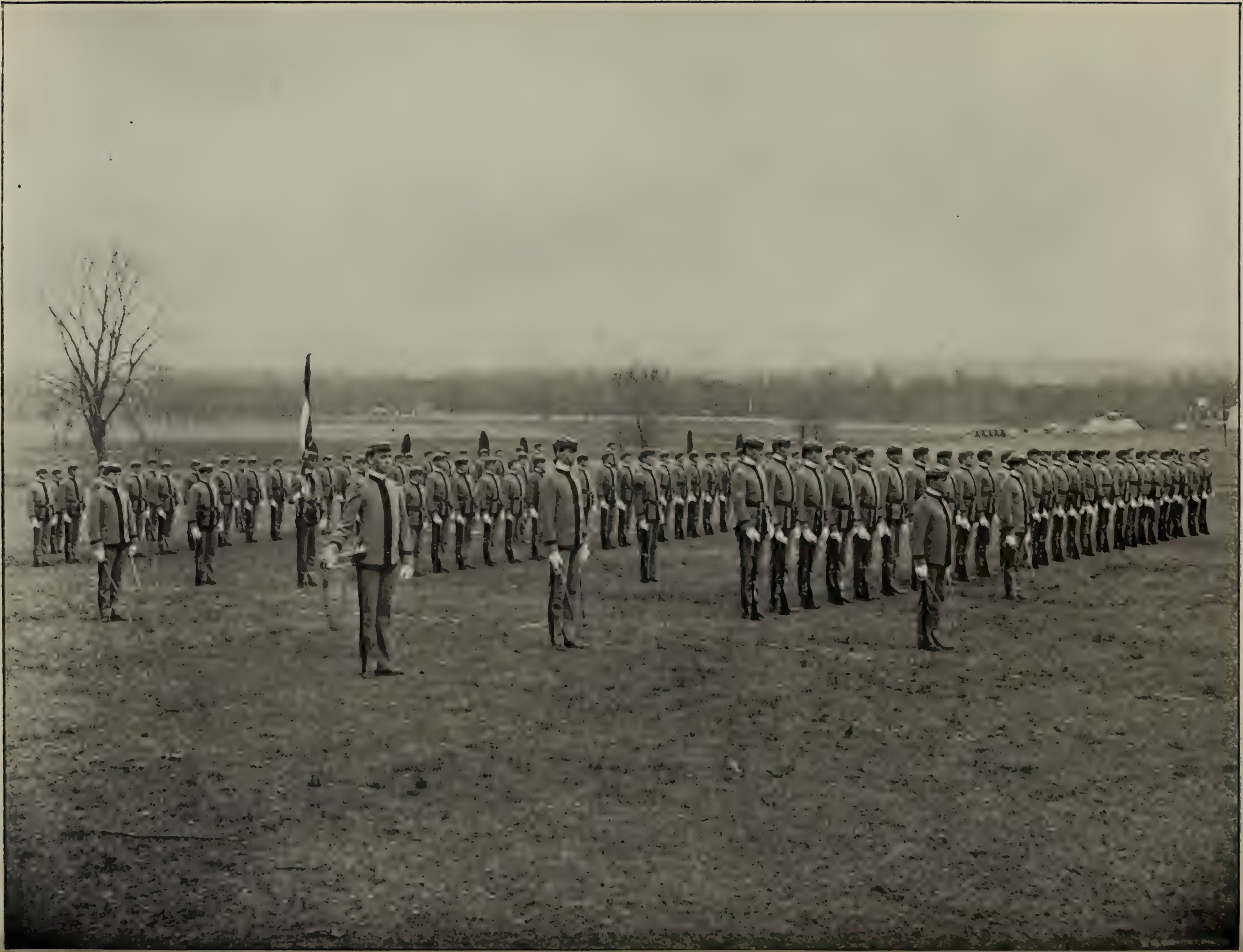
PHYSICAL LABORATORY—STUDENTS AT WORK.

ENTOMOLOGICAL LABORATORY—STUDENTS AT WORK.

BOTANICAL LABORATORY--STUDENTS AT WORK.



Major A. S. R. Grason,
1st. Lieutenant and Adjutant S. M. Peach. 1st Lieutenant and Quartermaster W. H. Weigand.
Sergeant-Major F. B. Hines.



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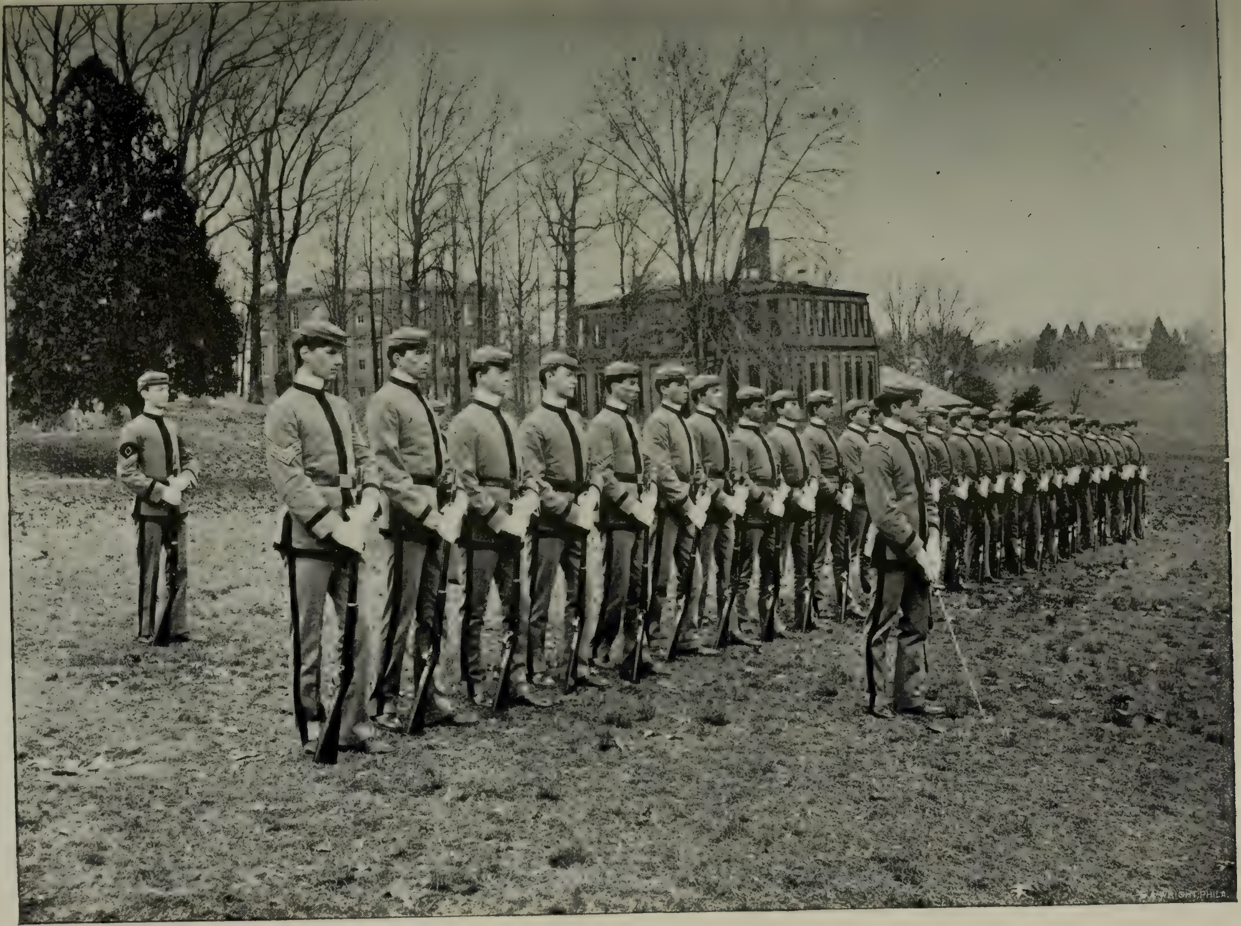
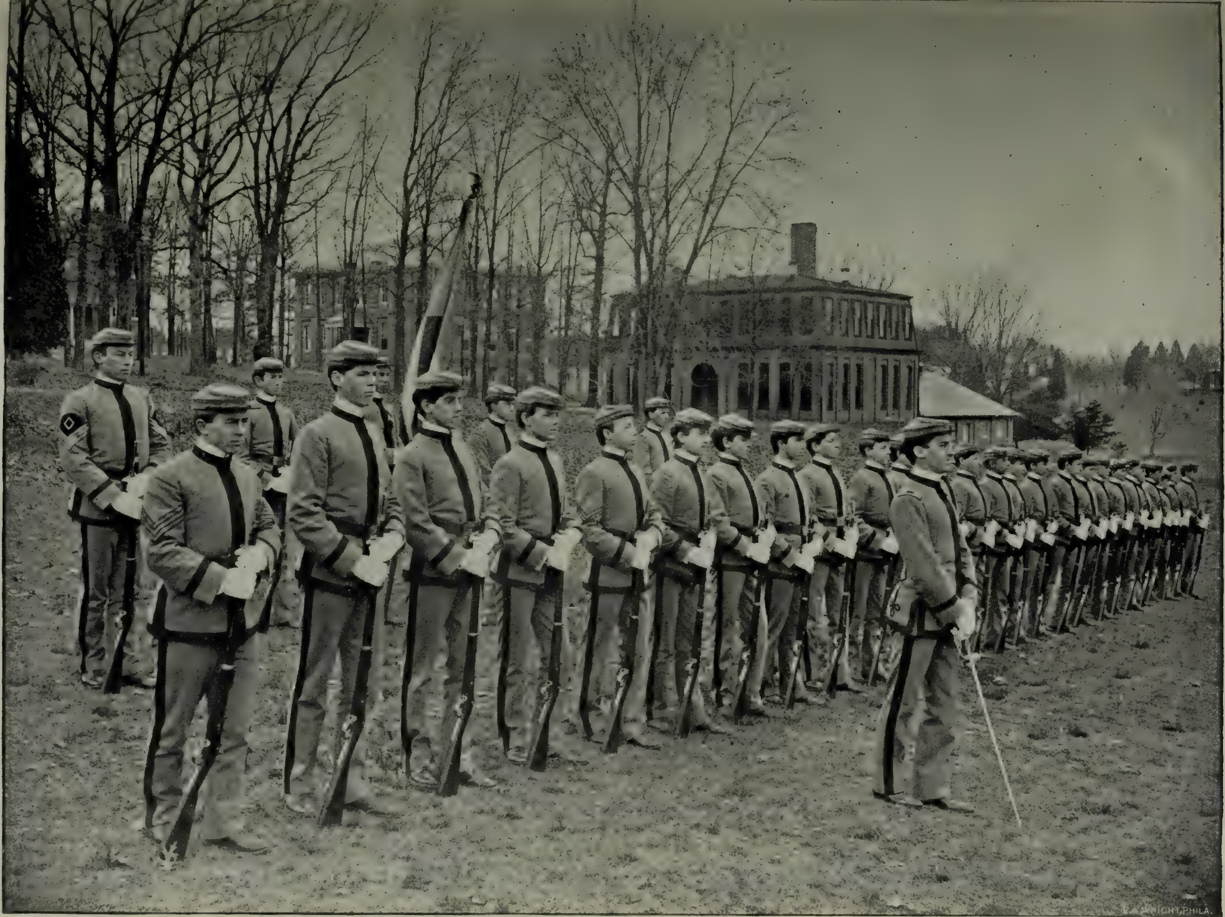

WRIGHT, PHILA.

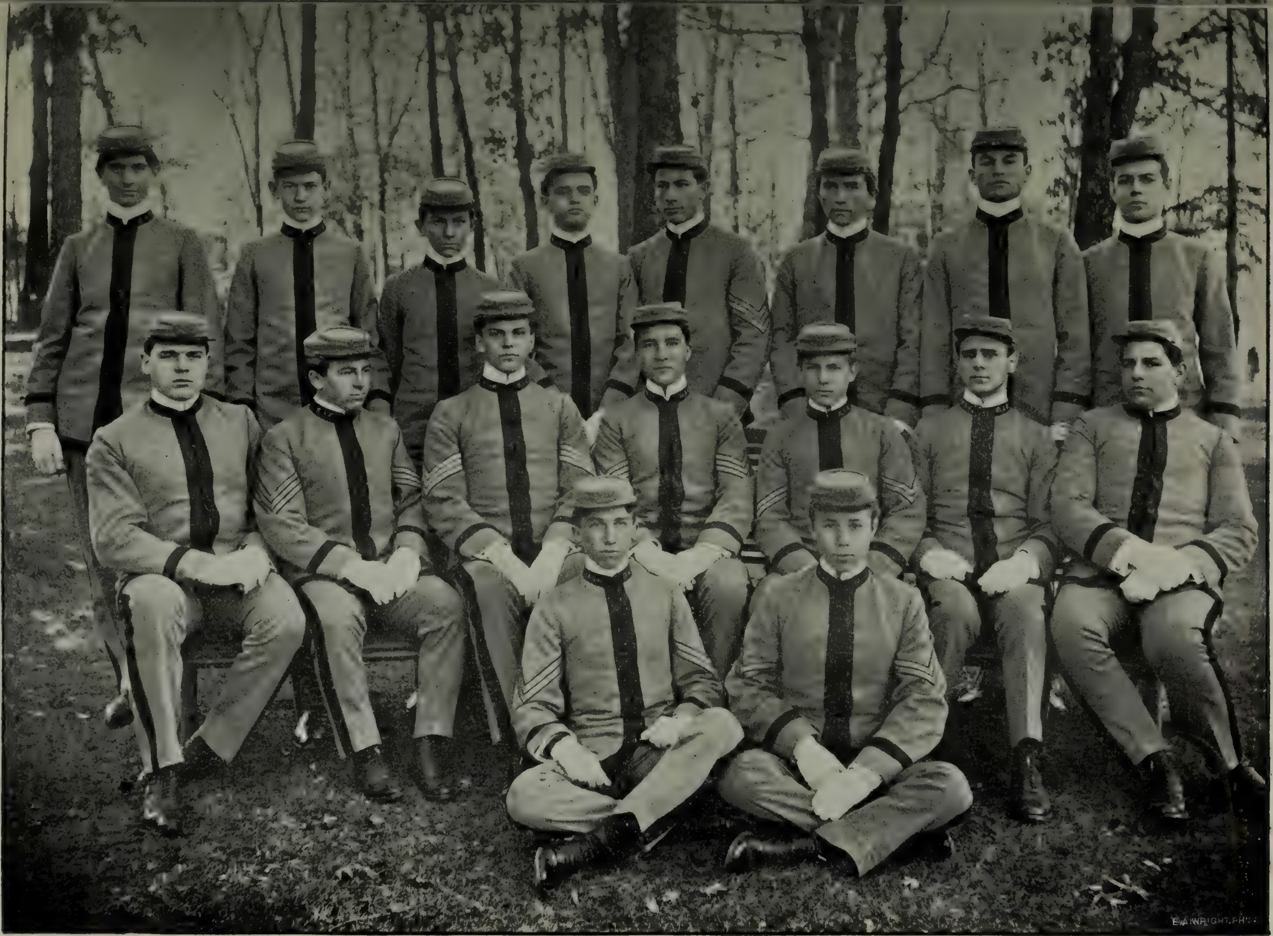
COMPANY "A."



F. A. WRIGHT, PHILA.

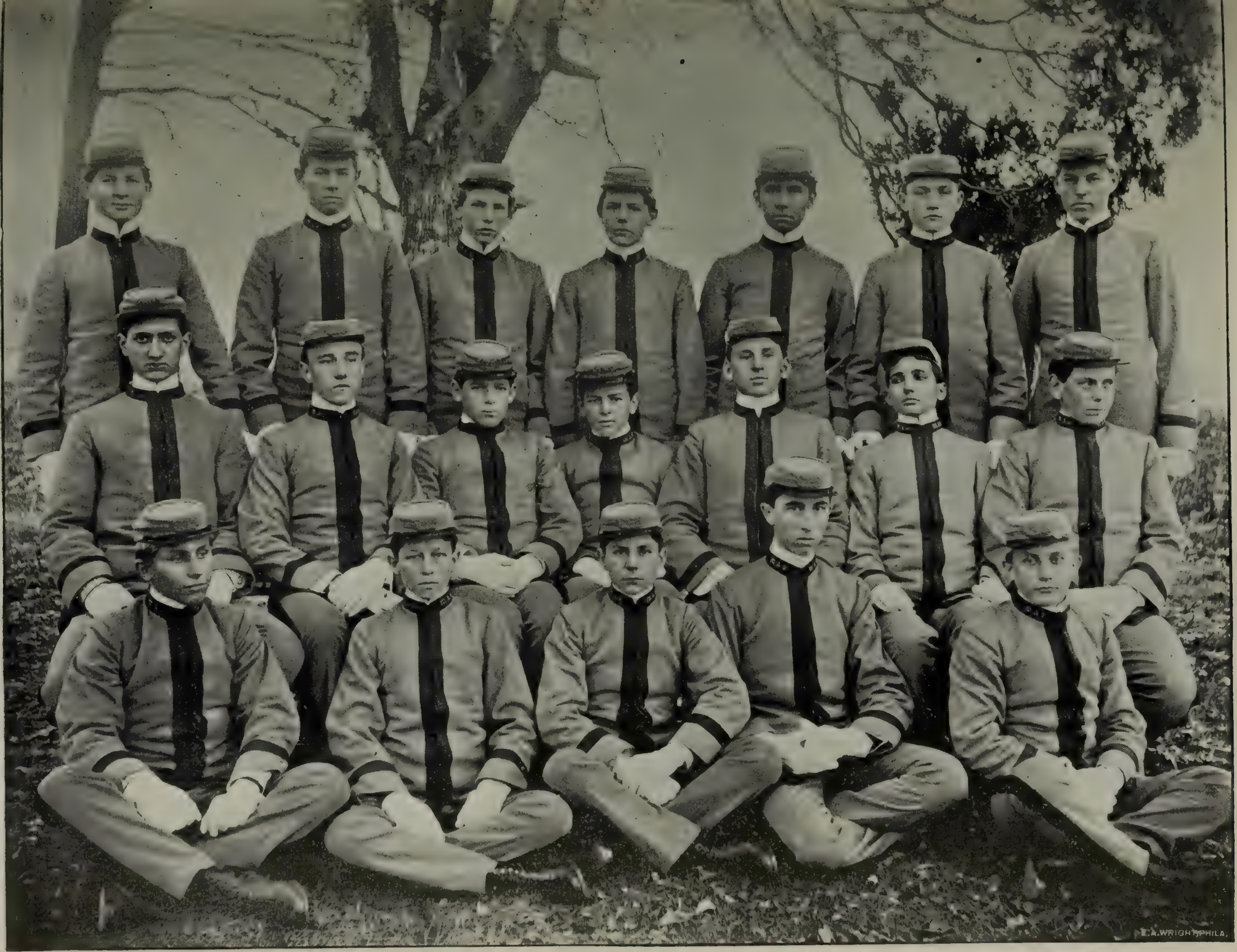
COMPANY "C."

CLASS OF 1901.


E.A.WRIGHT,PH

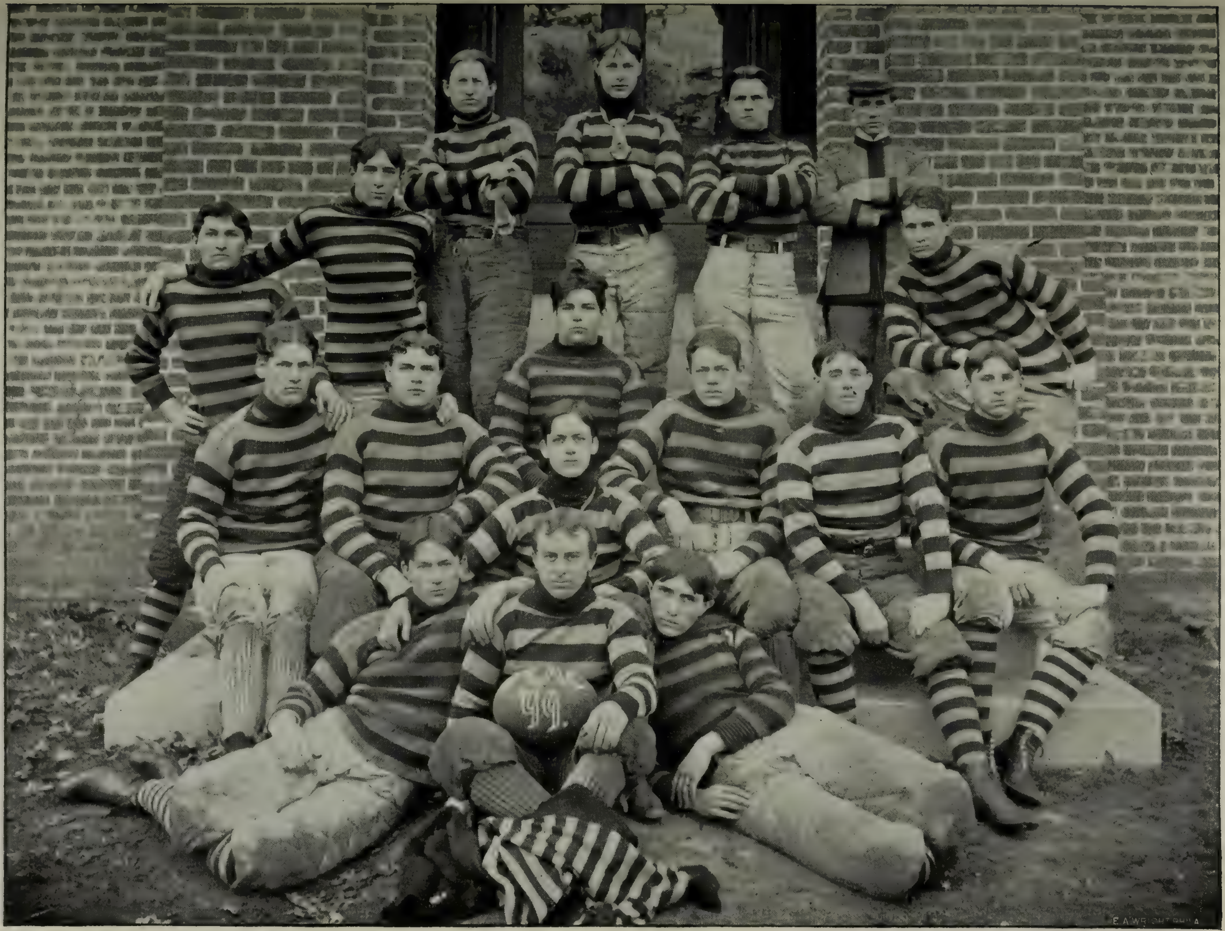
CLASS OF 1902.

E.A. WRIGHT PH.


E. A. WRIGHT, PHILA.

CLASS OF 1901

EDITORIAL STAFF



FOOT BALL TEAM.

E. A. WRIGHT, PHILA.

BASE BALL TEAM.

E. A. WRIGHT, PHILA.

THE GLEE CLUB.

F. A. WRIGHT PHILA

UNIVERSITY OF ILLINOIS

PRESIDENT'S OFFICE.

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Maryland Agricultural College Catalogue

UNIVERSITY OF ILLINOIS
PRESIDENT'S OFFICE

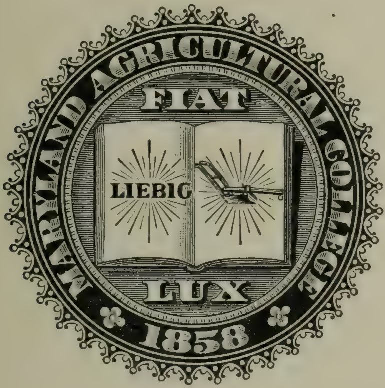
Year 1901-1902.

UNIVERSITY OF ILLINOIS
PRESIDENT'S OFFICE.

THE

MARYLAND

AGRICULTURAL COLLEGE



CATALOGUE.

YEAR 1901-'02.

Board of Trustees.

Members Ex-officio.

Hon. John Walter Smith	Governor, President of the Board.
Hon. J. W. Hering	Comptroller of the Treasury.
Hon. Isidor Rayner	Attorney-General.
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Hon. John Hubner	President of the Senate.
Hon. Lloyd Wilkinson	Speaker of the House of Delegates.

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Chas. B. Calvert, Esq	College Park, Md.
Chas. H. Stanley, Esq	Laurel, Md.
Hon. M. de K. Smith	Chestertown, Md.
Harold Walsh, Esq	Jerusalem Mills, Md.

Members Appointed by the Governor.

Chas. W. Slagle, Esq., Baltimore, Md	Term	expires	1902.
W. S. Whiteford, Esq., Whitefords, Md	"	"	1902.
J. M. Monroe, Esq., Anne Arundel Co., Md	"	"	1904.
Hon. Chas. H. Evans, Baltimore, Md	"	"	1904.
C. J. Purnell, Esq., Snow Hill, Md	"	"	1906.
Hon. David Seibert, Clear Spring, Md	"	"	1906.

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COMMITTEE ON FINANCE.

Messrs. Vandiver, Stanley, Walsh, Monroe and Dr. Hering.

COMMITTEE ON EDUCATION.

Messrs. Evans, Walsh, Dr. Hering and Hubner.

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COMMITTEE ON EASTERN BRANCH.

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Messrs. Whiteford, Calvert, Slagle, Stanley and Evans.

COMMITTEE ON EXECUTIVE MATTER.

Messrs. Stanley, Vandiver, Evans, Monroe, Slagle and Whiteford.

Officers and Faculty of Instruction.

R. W. SILVESTER,

President and Professor of Mathematics.

Thomas H. Spence, A. M.	Vice-Pres. and Prof. of Languages.
Maj. J. C. Scantling, U. S. A. Retired	Commandant of Cadets.
W. T. L. Taliaferro, A. B.	Prof. of Agriculture.
Harry Gwinner, M. M. E.	Prof. of Mechanical Engineering.
H. B. McDonnell, M. D., B. S.	Prof. of Chemistry.
Henry Lanahan, A. B.	Prof. of Civics and Civil Engineering.
James S. Robinson	Prof. of Horticulture.
A. L. Quaintance, M. S.	Prof. of Entomology and Associate in Horticulture.
	Prof. of Pathology and Botany.
F. B. Bomberger, A. M.	Prof. of English and Civics.
Samuel S. Buckley, M. S., D. V. S.	Prof. of Veterinary Science.
Henry T. Harrison	Principal of Preparatory Department.
Chas. S. Richardson	Director of Physical Culture and Instructor in Public Speaking.
J. H. Mitchell, M. E.	Assistant in Mechanical Engineering and Instructor in Electrical Engineering.
E. P. Sansten, M. S.	General Assistants in Entomology, Pathology and Botany.
J. R. Laughlin, B. S.	Assistants in Chemistry (State Work).
M. N. Straughn, B. S.	
J. B. Robb, B. S.	
T. R. Gough, B. S.	
C. G. Church, B. S.	
Jos. R. Owens, M. D.	Registrar and Treasurer.
W. O. Eversfield, M. D.	Physician in Charge.
Miss M. L. Spence	Stenographer and Typewriter.

Calendar for 1901-1902.

FALL TERM.

September 19th, 20th and 21st	Entrance Examinations.
Monday, September 23d, 9 A. M.	College Work Begins.
Friday, October 11th	Meeting of Board of Trustees.
Friday, December 13th	Meeting of Board of Trustees.
Friday, December 20th	Fall Term Ends.
Friday, December 20th, noon, to Friday, January 3d, 9 A. M.	Christmas Holidays.

WINTER TERM.

Friday, January 3d, 9 A. M.	Winter Term begins.
Friday, March 14th	Meeting of Board of Trustees.
Thursday, March 27th	Winter Term ends.
Thursday, March 27th, noon, to Tuesday, April 1st, 9 A. M.	Easter Holidays.

SPRING TERM.

Tuesday, April 1st, 9 A. M.	Spring Term begins.
June 2d to 7th	Final Examinations.
Sunday, June 8th, 4 P. M.	Baccalaureate Sermon.
Monday, June 9th	Class Day.
Tuesday, June 10th	Alumni Day.
Wednesday, June 11th, 11 A. M.	Commencement Day Exercises.
Friday, June 13th	Meeting of Board of Trustees.

HISTORICAL SKETCH.

As some misapprehension seems to exist in the mind of the general public as to the exact nature of the instruction offered by the Maryland Agricultural College, and the function of the institution as a part of the educational system of the State, it is thought advisable at this time to make some very definite statement of the precise character of the work of the College, its *raison d'etre*, and the aims and hopes of the present administration in endeavoring to carry out to the fullest extent the ambitions and ideals of its founders. A brief account of the origin and history of the institution may serve to make clear its purpose and the scope of its work.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6th, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original college building was erected, and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges were doing for the country, passed the "Land-grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part, at least, a State institution, and such it is at the present time.

In 1887 the Federal Congress passed a second important Act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees, so far separated it from the College as to put it under a special Director, who is directly responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments, in the form of bulletins, for the information and guidance of those interested in agriculture. Since the inception of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well-recognized factor in the agricultural development of Maryland.

Once more, in 1892, the Federal Government came to the aid of the agricultural and mechanical colleges. By the Act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of the agricultural and mechanical colleges. The primary object of this legislation was the development of the departments of agricultural and the mechanical arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College, and a somewhat similar institution for the education of colored students, located at Princess Anne, on the Eastern Shore of Maryland.

During the last seven years the history of the College has been that of steady growth. This fact is evidenced by the increased numbers of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the new chemical laboratory, the mechanical engineering building, the Morrill Hall and the new college barn—as well as by the establishment of the Department of Farmers' Institutes and the Departments of State Entomology and State Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George's County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least ten trains a day, from each city, stop at College Station, thus making the place easily accessible from all parts of the State. The telegraph station is Hyattsville, connected with the college by a private telephone line.

The college grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north, on the same road. Connection with Washington by the District and Suburban Electric Railway has recently been established.

The site of the college is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The college farm contains about three hundred acres, and is devoted to the gardens, orchards, vineyard and to general farming.

The main college building is of brick, five stories in height. It contains the students' quarters, mess hall, chapel, lecture rooms and offices. The dormitories are large, well ventilated, and provided with fire escapes and bath and water rooms. All the buildings are lighted with gas and heated with steam from central plants on the college grounds. During the past summer extensive improvements were made in the plumbing and sanitary arrangements of the building. An addition to the main building has been erected, containing commodious bath rooms on each floor, with the most modern appliances for the comfort and health of the students.

The Mechanical Engineering Department is located in a new two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for carpentry and forging, machinery rooms, a drawing room, library and office. It is a model building of its kind.

The new chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals, which work is assigned to the Professor of Chemistry at this college by an Act of the General Assembly. He is thus the State Chemist.

In 1894 the present building of the gymnasium and library was erected. The gymnasium on the ground floor is well furnished with modern athletic appliances. The library and reading room is on the second floor, and is a large, well-lighted and convenient room for the purpose.

One of the most noteworthy additions to the group of college buildings is the new Morrill Hall. The building provides ample accommodations for the Departments of Agriculture, Horticulture, Biology, Physics, Entomology, Pathology and Veterinary Science, thus relieving the pressure of close quarters, from which these departments have suffered, and greatly extending their opportunities for the development of high-grade scientific work.

HOSPITAL.

A modern hospital, well equipped—a long-felt want—is in process of construction, and will be completed by the opening of scholastic exercises in the fall. Our patrons will no doubt be gratified to know that this addition is so near at hand. Any form of contagious disease can thus be isolated, and the work of the College be continued without danger to those remaining.

Another important improvement to the working facilities of the College and farm is a new and model barn. Especial attention is invited to the arrangement of this building, which is in many ways an example of an almost perfect general utility farm building.

The general appearance of the college grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower pots, and the view from the grove and campus cannot be surpassed.

The location of the college is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for nearly ten years.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State School of Science and Technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture, and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen, and the making of the man of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life, such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to the many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction, looking to the special training of the student in agriculture, mechanical engineering, the natural and physical sciences and belle lettres, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has been prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described: It begins with the student in his first, or Freshman year, a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore year, differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third or junior year, until in his last, or senior year, his work consists wholly of one or more closely connected topics in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratories and mechanical workshops, a student is able to become so proficient in his chosen line of work that when he leaves the College a career is open to him if he chooses to avail himself of it.

The Agricultural Colloge is, legitimately, the crowning point of the Public School System of Maryland. Its aim is to provide a higher education to the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS—EQUIPMENT AND WORK.

The following is a brief account of the equipment of the several departments of the college, and the general character of the instruction given in each.

AGRICULTURAL DEPARTMENT.

Prof. W. T. L. Taliaferro.

The Agricultural Department offers four courses—(a) a four-years' course, leading to the degree of B. S.; (b) a special two-years' course; (c) a special creamery course; (d) a ten weeks' winter course.

Outline of Four Years' Course, Freshman Year:

First Session, Course I.—Seven periods per week; three theoretical, four practical. The general principles of agriculture, including the composition of soils and plants, the mechanical conditions of soils, elementary drainage, cultivation of the soil, plant reproduction, manures and fertilizers, rotation of crops, food and manure value of crops, farm live stock.

This course aims to give a comprehensive, though elementary knowledge of the principles and practice of agriculture, and is arranged on the basis of a minimum of theory and a maximum of facts. Gulley's "First Lessons in Agriculture" is used as a text-book, but the greater part of the work is in the fields and stables.

SOPHOMORE YEAR.

First Session..Course II.

Seven periods per week; three theoretical, four practical. Crop Production—the study of farm crops in detail, as to characteristics and requirements, including local adaptation, fertilization, cultivation, harvesting. Text-book, Morrow and Hunt's "Soils and Crops," in connection with lectures and laboratory and field work on the Station farm. This subject is taken up again in the spring, with a special reference to spring crops.

Course III.—Breeds of Stock and Stock Judging. This course includes the study in detail of the principal breeds of farm stock, their history, purpose and characteristics, and practical stock-judging. Text-book, Curtiss' "Horses, Cattle, Sheep and Swine." Breeders' Gazette," "Hoard's Dairyman," and bulletins of the U. S. Dept. of Agricultural and Experiment Stations are used for reference.

Second Session..Course IV.

Eight periods per week; four theoretical, four practical; (a) The study of the physical and chemical conditions of soils in their relation to agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too strongly emphasized. The study of this important subject is conducted by means of laboratory and field work. Lecture and text-book, Prof. King's "The Soil." (b) Cultivation of Spring Crops; lectures and practical work, field notes.

JUNIOR YEAR.

First Session..Course V.

Four periods per week; two theoretical, two practical. The Principles of Stock Breeding. The wonderful success which has attended the efforts of well-informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text-book in the course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

Second Session..Course VI.

Five periods per week; two theoretical, three practical. (a) Farm machinery; lectures and practical work. (b) Drainage; practical work and text-book, Waring's "Drainage for Profit and Health."

SENIOR YEAR.

First Session....................................Course VII.

Ten periods per week. (a) Fertilizers and Soil Fertility; text-books, Voorhees' "Fertilizers," Robert's "Fertility of the Land." (b) Stock Feeding; lectures and practical work; reference books, Henry's "Feeds and Feeding," experiment and U. S. Agricultural Department bulletins.

Second Session.................................Course VIII.

(a) Dairying and Creamery Work; lectures and practical work.—Mr. Doane. (b) Farm Specialties.

DEPARTMENT OF MECHANICAL ENGINEERING.

Harry Gwinner, Professor.
J. Hanson Mitchell, Assistant.

This department offers a course to those who desire to prepare themselves to design and construct machinery and superintend engineering establishments. With this end in view is offered en education based on Mechanics, Drawing, Mathematics, Physics and Modern Languages, together with a practical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department, and the hours allotted to each, will be found in the "Outline of Courses." The details of those taught in the department are as follows:

FRESHMAN YEAR.

Both Sessions.......................................Course I.

Mechanical Drawing, eight periods per week, first session, eight hours the second. Practice in plain lettering, use of instruments, projections and simple working drawings; the plates upon completion being enclosed in covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

Mr. Mitchell.

First and Second Sessions...........................Course II.

Technical Instruction—Three hours per week first session; two periods second session. Explanation of the reading of mechanical drawings. The proper cutting, angles, care and adjustment of carpenter tools. Relative strength of wood joints. Wood: Its shrinking and warping, and how to correct and prevent. Text, Goss' "Bench Work in Wood." Drill in problems in Arithmetic, Algebra and Drawing, by notes and lectures. Mr. Mitchell.

Both Sessions..Course III.

Shop Work—Six periods per week. Use and care of carpenter tools; exercises in sawing, mortising, tenoning and laying out work from drawings; wood-turning and pattern-making.

Prof. Gwinner.

SOPHOMORE CLASS.

Both Sessions..Course IV.

Mechanical Drawing—Four periods per week first session; six the second. Free-hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading. Text-book, Rouillion's "Mechanical Drawing." Mr. Mitchell.

First Session..Course V.

Elementary Applied Mechanics—Three periods per week. Transmission of power by belts and pulleys, the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting, and bending movements of beams. Jamieson's "Applied Mechanics" is the text used. Prof. Gwinner.

Both Sessions..Course VI.

Shop Work—Four periods per week first session, six the second. Blacksmithing—the elementary operations of drawing out, upsetting, bending and welding of iron, and making and tempering of steel tools; moulding and casting in iron, and the management of the cupola. Mr. Mitchell.

JUNIOR YEAR.

Both Sessions..Course VII.

Elementary Machine Design—Four periods per week. The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Wells' "Engineering, Drawing and Design" is the text used. Mr. Mitchell.

Both Sessions.................................Course VIII.

Shop Work—Six periods per week. Elementary principles of vise and machine work, which includes turning, planing, drilling, screw-cutting and filing. This is preceded by a study of the different machines used in the machine shops. Prof. Gwinner.

Second Session.................................Course IX.

Descriptive Geometry—Three periods. Its relation to mechanical drawing, and solution of problems relating to magnitudes in space, bearing directly upon those mostly used by the mechanical engineer. Text-book, "Faunce's Descriptive Geometry."

Prof. Gwinner.

Second Session.................................Course X.

Steam Engine and Boilers—Three periods per week. The principles of steam and the steam engine. The slide valve, and valve diagrams; the indicator and its diagram; steam boilers—the various types and their advantages, including the method of construction. Text used is Jamieson's "Steam and Steam Engines."

Prof. Gwinner.

SENIOR YEAR.

Both Sessions.................................Course XI.

Machine Design—Four periods per week first term, six the second. The calculation and design of pipes, belt and tooth gearing, beams and cranes. Text, Low & Bevis' "Machine Drawing and Design." Prof. Gwinner.

First and Second Sessions.........................Course XII.

Shop Work—Eight periods per week first session, ten hours second session. Advanced machine work; the laying out, assembling and construction of some piece of machinery—such as an engine, lathe or dynamo. Prof. Gwinner.

Second Session.................................Course XIII.

Testing—Four periods per week. A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam gauges, slide valve setting and indicator practice. The slide rule, and determining the amount of moisture in steam. Prof. Gwinner.

EQUIPMENT.

The Mechanical Engineering Laboratory is a two-story brick building, 45 feet by 60 feet, contains the carpenter, forge and foundry, and machine shops, one drafting and two lecture rooms. An annex, 25 feet by 50 feet, contains two 60-horse-power boilers, which furnish steam for power, heat and experimental purposes.

The carpenter shop contains accommodations for twelve students in bench work and wood-turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes and a grinding stone.

In the forge shop are nine power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smith tools for each forge. The moulding and casting is done in the same room as the forge work, and great attention is given this branch as a knowledge of the foundry work is very essential to the engineer. The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, and with the necessary flasks and tools.

The machine shop contains one Reed 10-inch speed lathe, one 24-inch Gray planer, one 12-inch Reed combined foot and power lathe, a Diamond No. 4 emery tool grinder, one 14-inch Reed engine lathe, a Snyder 24-inch drill press and an assortment of vises, taps, dies, pipe tools and measuring instruments.

An 8-inch by 12-inch engine drives the machinery of the different shops. It was presented to the College by the city of Baltimore, and secured through the efforts of Com. John D. Ford, of the U. S. N.

The drafting room is well-equipped for practical work, having suitable benches, lockers and blue print facilities.

Tours of Inspection.—The members of the Senior Class go to Baltimore or Washington for the purpose of inspecting well-known manufacturing plants.

DEPARTMENT OF MATHEMATICS.

PROF. R. W. SILVESTER.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our college course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering and physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

FRESHMAN YEAR.

First Session..Course I.

Number of periods per week, five. Algebra—Wentworth's complete, as far as Logarithms.

Prof. Harrison.

Second Session..Course II.

Number of periods per week, eight. Algebra—Wentworth's completed; Geometry—First three books of Wentworth's Plane Geometry.

Prof. Harrison.

SOPHOMORE CLASS.

First Session..Course III.

Number of periods per week, four. Geometry, plane and solid, completed.

Second Session..Course IV.

Number of periods per week, four. Trigonometry, completed.

Prof. Silvester.

JUNIOR CLASS.

First Session..Course V.

Number of periods per week, five. Analytics, completed.

Prof. Silvester.

DEPARTMENT OF ENGLISH AND CIVICS.

Professor F. B. Bomberger.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English of necessity lies at the base of all other courses of instruction. A clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature (English and American) theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and thesis writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

Prof. F. B. Bomberger.

FRESHMAN YEAR.

First Session..................................Course I.

All students. Five periods per week. English language, review of grammar, practical exercise in analysis and synthesis, composition and letter-writing.

Second Session............................Course I (Continued).

All students. Five periods per week. Texts used in Course I—Lockwood's "Lessons in English" and Buehler's "Exercises in English."

SOPHOMORE YEAR.

First Session...Course II.

Classical, Scientific and Mechanical students. Four periods per week. Principles and practice of rhetoric. Text used in Course II—Genung's "Practical Rhetoric" and "Outlines of Rhetoric."

Second Session.......................................Course III.

Classical, Scientific and Mechanical students. Three periods per week. Principles and practice of logic. Text used in Course III—Jevon's-Hill's "Logic."

JUNIOR YEAR.

First Session...Course IV.

Classical students only. Five periods per week. English Literature. Text-book, lectures, readings, composition. Texts used in Course IV—Pancoast's "English Literature," Arnold's "English Literature" and Jaine's "English Literature." All students.

First Session...Course V.

All students. One period per week. Practice in English Composition. Special Lectures.

Second Session.......................................Course VI.

Classical students only. Five periods per week. American Literature. Text-book, lectures, readings, composition. Text used in Course VI. Bronson's "American Literature."
Second Session..........................Course V (Continued).

All students. One period per week. Practice in English Composition; special lectures.

SENIOR YEAR.

First Session...Course VII.

Classical students only. Four periods per week. Critical study of English Classics, following the outline for college entrance requirements in English.

First Session...Course VIII.

Classical students only. Three periods per week. Principles of Psychology. Text-book and lectures; text used in Course VIII—Dewey's "Psychology."

Second Session........................Course VII (Continued).

Classical students only. Four periods per week. Critical study of English Classics.

Second Session........................Course VIII (Continued).

Classical students only. Three periods per week. Principles of Psychology; text-book and lectures; text-book used in Course VIII—Dewey's "Psychology."

HISTORY AND CIVICS COURSES.

Prof. F. B. Bomberger.

FRESHMAN YEAR.

First Session....................................Course I

Classical students only. Four periods per week. Outlines of Ancient History. Text-book and lectures; text used in Course I—Swinton's "Outlines of History."

Second Session............................Course I (Continued).

Classical students only. Four periods per week. Outlines of Ancient History; text-book and lectures; text used in Course I—Swinton's "Outlines of History"—completed.

SOPHOMORE YEAR.

First Session....................................Course II.

Classical and Scientific students. Three periods per week. Outlines of Mediaeval and Modern History; text-book and lectures; text-book used in Course II—Myer's "Mediaeval and Modern History."

Second Session..........................Course II (Continued).

Classical students only. Three periods per week. Course II completed.

JUNIOR YEAR.

First and Second Sessions.........................Course III.

Classical, Scientific and Mechanical students. Two periods per week. Civil Government in the United States. Text-books used in Course III—Fiske's "Civil Government," Hinsdale's "American Government" and Clark's "Outlines of Civics."

First and Second Sessions..........................Course IV.

Classical students only. Two periods per week. United States Government; special lectures on Constitution of Maryland. Textbooks used in Course IV—Townsend's "Analysis of the Constitution" and Bryce's "American Commonwealth."

SENIOR YEAR.

First Session...Course V.

Classical and Mechanical students. Three periods per week. Principles of Political Economy; text used in Course V—Will's "Political Economy."

First Session...Course VI.

Classical students only. One period per week. Lectures on "Business Law" as used in everyday life. Text-book used in Course VI—Parson's "Commercial Law."

Second Session..........................Course V (Continued).

Classical and Mechanical students. Three periods per week. The Industrial Development of the United States; Economic Science and current problems. Special lectures.

Second Session.......................................Course VI.
Classical students only. One period per week. Lectures on Constitutional and International Law, as applied to current political life.

DEPARTMENT OF CHEMISTRY.

Prof. H. B. McDonnell.

The Chemical Department occupies the new chemical laboratory building, a substantial and commodious brick structure, which is located about one hundred yards north of the main building. It contains, on the first floor, a lecture room, preparation room, office, and two laboratories, with communicating balance room, which are used for State work. On the second floor are the students' laboratories one for each class, a supply room and students' balance room. The department has a reference library of standard works, which is being gradually increased. The equipment of the laboratory is unusually full and complete.

Instruction in chemistry is both theoretical and practical. Each student is assigned to a laboratory desk, which is provided with gas and water connections, and an outfit of chemicals and apparatus, for which he is held responsible, being charged for apparatus broken. This charge has averaged less than one dollar per year for Sophomores, and less than two dollars per year for Juniors and Seniors.

Students making a specialty of chemistry are allowed to use the laboratories at any time between the hours of 8 A. M. and 5 P. M., and are encouraged to devote more time to practical work than is called for by the schedule. Such students, have, invariably, been able to secure positions after graduation.

The outline of the course, with names of text-books used and the number of hours per week, is as follows:

SOPHOMORE YEAR.

First Session..Course I.

"Introduction to the Study of Chemistry," Remsen's; recitative four, practical three.

Second Session..Course I.
The same as first session; recitative four, practical three.

JUNIOR YEAR.

First Session..Course II.

"Qualitative Analysis," Mason's; recitative two, practical six; "Determinative Mineralogy," Brush's; recitative two, practical four.

Second Session..Course III

"Advanced Chemistry," Remsen's; recitative, four; "Quantitative Analysis" and "Assaying," practical, ten.

SENIOR YEAR.

First Session..Course IV.

"Organic Chemistry," Remsen's; recitative, four; determination of molecular and atomic weights, organic analysis, analysis of fodder, feed stuffs, water, sugar, organic experiments, assaying, etc.; practical, ten.

Second Session..Course V.

The work of this session will be arranged to suit the requirements of the individual student, and will consist mainly in the preparation of a thesis, involving some original research; recitative, four; practical, ten.

POST-GRADUATE COURSES.

Advanced courses in general and technical chemistry and quantitative analysis are arranged to meet the wants of individual cases.

For graduates who have completed the five courses, as above, or their equivalent, courses are arranged leading to the degree of M. S It is possible, by diligent application, to complete such a course in one year's work. A thesis is required.

DEPARTMENT OF PHYSICS.

Professor Henry Lanahan.

The physical lecture-room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture-room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

SOPHOMORE YEAR.

First Session..Course I.

Elementary Physics, three periods per week.

The course consists of lectures, recitations and experimental demonstrations by the instructor, on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "Elements of Physics."

JUNIOR YEAR.

Both Sessions..Course II.

Physics.—Four periods per week class-room work, and four periods per week laboratory work.

The course begins with a review of mechanics, after which heat, sound, electricity and magnetism, and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurement. Written reports of the work done in the laboratory are required weekly. The text-books used are "Theory of Physics," Ames, and "Manual Experiments in Physics," Ames and Bliss.

SENIOR YEAR.

Both Sessions................................Course III.

More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF CIVIL ENGINEERING.

Professor Henry Lanahan.

JUNIOR YEAR.

Both Sessions ....Course I

Surveying.—Two periods per week class-room work; three periods per week field practice.

The course includes the use and adjustment of engineering instruments; the methods of land surveying; the platting and computing of areas; the dividing of land; the theory of the Stadia; true meridian lines; leveling; topographical surveying; railroad curves and cross sectioning. Text, Davis' "Surveying." If time permits, the methods of locating and staking out new roads will be taken up, and some attention given to road construction. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level.

SENIOR YEAR.

First Session....................................Course II.

Graphic Statics.—Three periods per week.

Including the theory and practice of the graphical methods of determining stresses in framed structures, particularly roof trusses; and bending movements and shears in beam. The course is based on Hoskins' Graphic Statics, and many of the problems are solved analytically as well as graphically.

Second Session..........................Course II (Continued).

Strength of Materials.—Three periods per week.

Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns and shafts. The text used is Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.

DEPARTMENT OF HORTICULTURE.

James S. Robinson, Professor,
Prof. A. L. Quaintance, Associate.

FRESHMAN YEAR.

Second Session......................................Course I.

Nine periods per week; lectures and practical work. 1. Methods of propagation of plants; (a) seeds; study of methods of germination, seeding and vitality; (b) grafting; (c) budding; (d) cuttings; (e) layers. 2. Character of soils as best adapted to different fruits and vegetables. Methods of modification of soils. 3. Preparation of soil for planting and cultivation of fruits and vegetables. 4. Manures, compost and fertilizers for fruits and vegetables. 5. Hot-beds and cold-frames. The practical work is intended to give students a knowledge of the operations in the green-house, garden and orchard. The work will include the management of green-house crops, propagation of plants, planting, pruning, etc. These exercises will be supplemented by familiar talks on the operations performed. Required preparations: General knowledge of soils and proper soil conditions, and a general knowledge of the principles of soil fertilization, cultivation of plants and plant reproduction.

SOPHOMORE YEAR.

First Session......................................Course II.

One period per week. Lectures, planting, cultivation and management of small fruits.

JUNIOR YEAR.

First Session......................................Course III.

Otericulture or Vegetable Gardening. Two periods per week Lectures; a discussion of the principles of vegetable gardening and methods of producing and handling the various crops. The subject is considered from the standpoint of production for home use as well as for commercial purposes.

Second Session (First Half)........................Course IV.

Landscape gardening; two consecutive periods per week. The treatment of the subject is with special reference to the improvement of the home surroundings; the making of lawns; the arrangement of trees, shrubbery and other plants; the laying out and construction of drives.

Second Session (Second Half)........................Course V.

Spraying of plants. Two consecutive periods per week. A discussion of the principles underlying the operation, and examination of the apparatus used; the preparation of insecticides and fungicides, together with practical demonstration in the field. Reference book—Lodeman's "The Spraying of Plants."

SENIOR YEAR.

First Session..................................Course VI.

Pomology. Two periods per week. A discussion of the principles underlying the growing of orchard fruits. Selection of location for the orchard; orchard management; handling and marketing the fruit.

Second Session..................................Course VII.

Plant variation and plant breeding. Two periods per week. The fact and philosophy of variation; the effects of soil, climate, cultivation and other ameliorating influences upon plants. The crossing and hybridizing of plants and their limits; the importance of the cross, and its relations to practical horticulture; breeding for a special purpose; selection, heredity, and the origin of domestic varieties.

Reference Books—Bailey's "Survival of the Unlike," Bailey's "Plant Breeding," Darwin's "Cross and Self-Fertilization in the Vegetable Kingdom," Darwin's "Animals and Plants under Domestication."

First and Second Sessions........................Course VIII.

The work and time to be arranged with each student individually. This course is intended for advanced students, and will require some original research. It may be taken by Seniors as their major subject, or one of their minors.

DEPARTMENT OF VETERINARY SCIENCE AND ZOOLOGY.

Professor Samuel S. Buckley.

SOPHOMORE YEAR.

First Session....................................Course I.

Four periods per week for students in General Science course; four periods per week for students in Agricultural course.

Elementary Biology.—A study of the microscope and microscopic methods. The lower forms of plant and animal life. This course is obligatory for those who wish to pursue advanced work in this department, in botany or entomology.

Second Session...................................Course II.

Three lectures and two periods laboratory work per week for students in General Science and Agricultural courses.

Comparative Anatomy and Physiology.—Special reference to the processes of nutrition. Laboratory work will consist of dissections and tests, illustrating some of the chemical changes occurring within the body. Students in the General Science course will receive one extra lecture per week.

JUNIOR YEAR.

First Session....................................Course III.

Two lectures and four periods practical work for students in the Biological and Agricultural courses.

Comparative Anatomy and Physiology.—The organs of locomotion, form and action. Disorders of nutrition and of locomotion.

Second Session...................................Course IV.

Two lectures and four periods laboratory work per week for students in Biological and Agricultural courses.

Vertebrate Zoology.—This course is adapted to the requirements of courses depending upon it, and will be largely practical.

SENIOR YEAR.

First Session..Course V.

Two lectures and six periods of practical work per week. Diseases and accidents; emergency treatment; the administration of medicines; means of restraint; care and management; nursing; shoeing. This course may be elected as a minor.

Second Session......................................Course VI.

Two lectures and six periods of practical work per week.

Second Session..........................Course V (Continued)

Students electing Veterinary Science as a major subject must have completed Courses I to IV, inclusive. The course will conform to requirements of the subject of the Graduating Thesis, and must be equivalent to at least ten hours of recitative work throughout the year.

DEPARTMENT OF ENTOMOLOGY AND INVERTEBRATE ZOOLOGY.

Prof. A. L. Quaintance.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed with a view of giving the students as broad a knowledge of the subject as practicable in the time devoted to it. In the laboratory, attention is given to methods of investigation, insect anatomy, and preparation and classification of collections made in the field. The work of this department is open only to Juniors and Seniors in the Agricultural and General Science Courses, unless by special arrangement, and must be preceded by the Course in Elementary Biology in the Sophomore year.

JUNIOR YEAR.

First Session..Course I

Invertebrate Zoology.—Six periods per week; lectures and laboratory exercises.

This course involves a study of representatives of the principal groups of invertebrate animals, together with lectures on their structure and classification.

Second Session.......................................Course II.

Entomology.—General course; five periods per week. Lectures and laboratory exercises. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders, and the more important families; the habits and life history of insects, with special reference to those species that are of economic importance. The laboratory and field work includes the study of the more general features of insect anatomy, the determination of general species, and the collection and preservation of insects.

SENIOR YEAR.

First and Second Sessions.............................Course III.

Entomology.—Advanced course. Open only to students who have completed Courses I and II, or their equivalents. This course consists of special work in Morphology, or classification, or working out the life history of insects. Students making Entomology their major, will be required to devote at least ten hours per week, throughout the year, to this course, and prepare an original thesis upon the subject chosen or assigned.

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY.

————————————Professor.
————————————Assistant.

SOPHOMORE YEAR.

First Session...Course I.

Four periods per week. Simple Morphology of Plants, and Functions of Plant Organs. Bergen's Elements of Botany.

Second Session.......................................Course II

Four periods per week. Simple Morphology of Plants continued. This course must be preceded by Course I. Bergen's "Elements of Botany," and "Gray's Manual."

BOOKS OF REFERENCE, BOTANICAL DEPARTMENT.

SOPHOMORE CLASS.

Gray's Lessons and Manual; Briton and Brown, Flora of Northern United States; Bergen's Elements of Botany; Spalding's Introduction to Botany; Bastin's College Botany; Bessey's Botany for

High Schools and Colleges; Strasburger's Manual of Vegetable Histology; Arthur, Barnes and Coulter, Plant Dissection.

JUNIOR YEAR.

First Session..Course III.

Two lectures and a minimum of four laboratory hours per week Systematic study of Fall Flowers and Grasses, followed by a study of Structures, and Life Histories of Cryptogams, with special attention to fungi. This course necessarily embraces advanced work in microscopical technique, including imbedding, sectioning, staining and the preparation of permanent mounts, and must be preceded by Course II and a course in Practical Elementary Biology.

Second Session..Course IV.

Two lectures and a minimum of four periods of laboratory work per week. Morphology and Life Histories of Phanerogams, with special attention to plants of economic importance. The work in microscopical technique will be continued during this session. This course must be preceded by Course III.

BOOKS OF REFERENCE.

JUNIOR CLASS.

Goebel's Outlines of Classification and Special Morphology; Vines' Student Text-book of Botany; Coulter's Plant Life; Underwood's Moulds, Mildews and Mushrooms; Macbride's Slime Moulds of North America; Bennett & Murray, Cryptogamic Botany.

SENIOR YEAR.

First Session..Course V.

Two lectures and a minimum of six periods of laboratory work per week. Plant Physiology. This course must be preceded by Course IV, and may be elected as a minor.

Second Session..Course VI.

Two lectures and a minimum of six periods of laboratory work per week. Plant Pathology. This course embraces a study of parasitic fungi and their relations to the higher plants in producing disease. It also includes methods in the preparation and application of fungicides. Course VI must be preceded by Course V, and must be elected as a minor, following Course V.

Students electing Botany as a major subject must have had Courses I to IV, inclusive, or their equivalent, and must prepare a thesis along the line of the major work. An outline of the work and the hours will be arranged upon consultation with the Professor in charge.

BOOKS OF REFERENCE.

SENIOR CLASS.

Sach's The Physiology of Plants; Vines' Physiology of Plants; MacDougal's Plant Physiology; Sorauer's Treatise on the Physiology of Plants; Tubuef and Smith, Diseases of Plants.

ADVANCED WORK.

Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalent. This work is designed for students who wish to specialize in Botany or in Plant Pathology, and will consist largely of original investigation. Students applying for advanced work along these lines will be expected to spend practically all of their time in this department. The subject to be investigated, and an outline of the work will be arranged upon consultation with the Professor in charge.

DEPARTMENT OF LANGUAGES.

Prof. Thos. H. Spence.

The Department of Languages embraces the study of three branches; Latin, French and German. All students are required to take the courses in German and French; only students of the Classical Course take Latin.

The course of study in Latin is given with two ends in view—first, to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of Sallust, Virgil, Cicero, Horace, Livy, Tacitus and Juvenal, besides other authors, selected for sight reading.

On account of the large percentage of Germans in our population, a speaking knowledge of this language is very important, and especial attention is given to conversation throughout the course. After the elements of the language have been mastered, and a certain facility of translation acquired, the class is divided, and the students pursuing the Classical Course continue to translate from the works of classic German authors, while the students of the Scientific Courses are given scientific German for translation.

In French, also, after the elementary work and grammar have been completed, the students of the Classical Course, and those of the Scientific Courses are separated, the first selecting translations from French literature, the scientific students work of a scientific nature.

FRESHMAN YEAR.

First Session..Course I

Six periods per week. Grammar and composition, five hours; syntax, one hour.

FRESHMAN YEAR.

First Session....................................Course I—Latin.

Six periods per week—Grammar and Composition.

Second Session................................Course II—Latin.

Six periods per week. Continuation of Course I; also Translation in Gate to Caesar, or "Viri Romae." Text-books: Bingham's "New Latin Grammar;" Gildersleeve's "New Latin Primer;" Collar's "Gate to Caesar;" Rolph's "Viri Romae."

SOPHOMORE YEAR.

First Session...............................Course III—Latin

Six periods per week. Sallust's "Jugurtha," or "Caesar's Gallic War." Latin Prose Composition.

Second Session...............................Course IV—Latin.

Six periods per week. Virgil's "Aeneid," books I and VI. Mythology, Latin Prose Composition, Prosody, Ancient Geography. Text-books: Harper and Tolman's "Caesar;" Chase and Stuart's "Sallust;" Chase and Stuart's "Virgil;" Gayley's "Classic Myths;" Daniell's "Latin Prose Composition."

JUNIOR YEAR.

First Session................................Course V—Latin

Six periods per week. Cicero's Orations (selected), Latin Prose Composition.

Second Session................................Course VI—Latin

Six periods per week. Horace's Odes, Epodes and Satires (selected); Latin Prose Composition. Text-books, Chase and Stuart's "Cicero;" Chase and Stuart's "Horace;" Daniell's "Latin Prose Composition."

SENIOR YEAR.

First Session................................Course VII—Latin

Six periods per week. Livy, Book XXI, Latin Prose Thesis Work

Second Session................................Course VIII, Latin

Six periods per week. Juvenal's "Satires" (selected), Terence's "Andria," Tacitus' "Germania;" Latin Prose Thesis Work.

Text-books, Chase and Stuart's "Livy;" Chase and Stuart's "Tacitus;" MacLeane's "Juvenal;" West's "Terence."

SOPHOMORE YEAR.

Second Session................................Course I, German

Four periods per week, Elementary German. Text-book, Otis' "Elementary German."

JUNIOR YEAR.

First Session................................Course II, German

Three periods per week, German Translation.

Second Session................................Course III, German

Three periods per week. Continuation of Course II. Text-books selected from the following: Hauff's "Das Kalte Herz;" Schiller's "Der Neffe als Onkel;" Hillern's "Hoeher als die Kirche;" Grandgent's "Ali Baba and the Forty Thieves;" Sybel's "Die Erhebung Europas;" Walther's "Algemeine Meereskunde;" Northrop's "Geschichte der Neuen Welt."

SENIOR YEAR (Optional).

First Session..............................Course IV, German

Selected Readings in Scientific German.

Second Session..............................Course V, German.

Continuation of Course IV.

SENIOR YEAR.

First Session..............................Course I, French.

Five periods per week, Elementary French. French reader.

Second Session..............................Course II, French

Three periods per week. Selected Readings. Text-books: Selected from the following, also others, not yet determined: Whitney's French Grammar, Super's French Reader, Rougemont's La France, Fenelon's Telemaque, Herdler's Scientific French Reader, Dumas' Les Trois Mousquetaires.

PREPARATORY DEPARTMENT.

Prof. H. T. Harrison.

First Session..............................Course I

Arithmetic.—Ten periods per week. Wentworth's G. S Arithmetic completed.
Algebra.—Five periods per week. Wentworth's Algebra as far as Fractions.
History.—Five periods per week. United States History from 1775 to the present time.
Geography.—Five periods per week. Descriptive Geography completed.

English.—Eight periods per week. Spelling, Composition, Elementary, Technical Grammar, Parsing and Analysis, Elocution.
Prof. Richardson.

Second Session..............................Course II

Arithmetic.—Five periods per week. Advanced work.
Algebra.—Five periods per week. Wentworth's Algebra as far as Quadratics.

History.—Four periods per week. Colonial History and review of whole of Barnes' Brief History of United States.

Geography.—Five periods per week. Maury's Physical Geography, completed.

Bookkeeping.—Four periods per week. Single entry. Business.

English.—Eight periods per week. Spelling, Composition, Letter-writing, Technical Grammar.

Elocution.—Two periods per week.

Prof. Richardson.

MILITARY DEPARTMENT.

The Military Department is a distinctive feature of the college. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor and as Commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the three companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. Promotion in this Department is made according to merit and record in military matters.

The practical instruction of the cadets consists of daily infantry drill, outpost duty and artillery drill. The study of tactics and lectures on military science constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution in the true sense of the word.

DEPARTMENT OF PUBLIC SPEAKING.

Prof. Charles S. Richardson.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

First and Second Sessions, Sophomore and Freshman Classes, one period per week; Preparatory Department, four periods per week.

DEPARTMENT OF PHYSICAL CULTURE.

Prof. Charles S. Richardson.

The physical culture of the students is provided for by a regular course of instruction in the gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years.

Three periods per week, Preparatory, Freshman and Sophomore Classes.

One of the most valuable features of this Department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year.

By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

THE COLLEGE LIBRARY.

The college library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well-arranged and lighted, and is in all respects comfortable and convenient.

While the library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry, and the standard works of fiction. Several hundred volumes of bound government reports form an important addition to the reference works of the library. Many of the leading magazines and a large number of newspapers are subscribed for.

COURSES OF STUDY.

In order to systematize the work of the numerous departments of the College, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, four distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering, Scientific and Classical. In three of these, the Agricultural, Mechanical Engineering and Classical, a continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the classwork is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular study desired—agricultural, mechanical or the classical branches—is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientific agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical, general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for those who have neither time nor the opportunity to take the regular four years' course. In fact, it is really designed for those actually engaged in farming, and who can spare six or eight weeks during the winter to attend lectures, and to follow the practical work of the College and Station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry and chemistry, horticulture, entomology, farm accounts, farm buildings, carpentry and blacksmithing, veterinary science, the principles of citizenship and the elements of business law. The nominal charge of five dollars ($5.00) is made for the course. The entire expense, including board, need not be over fifty dollars ($50.00). The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering. The course leads to the degree of B. M. E.

The Classical Course was instituted to meet a demand on the part of the patrons of the College for a course of study which should prepare young men to enter the so-called learned professions. The course emphasizes the modern languages, Latin, mythology, English, civics and psychology, with a moderate amount of mathematics and the natural and physical sciences. The degree of Bachelor of Arts is conferred upon its graduates.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science—chemistry, biology, pathology, entomology, veterinary science, physics, civil engineering or political science. The basis of the course is a thorough training in mathematics, English, and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Junior year. In the Senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups of studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

OUTLINE OF COURSES.

SENIOR CLASS.

The work for the Senior year in Agriculture and General Science shall consist of a major subject, and two or more minor subjects. This work will be elective upon consultation with the Professor in charge of the major subject.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) hours' recitative work, at least ten (10) hours of which shall be devoted to the major subject, and ten (10) to the minor subject.

Practical work is denoted by figures in parenthesis.

Two hours of practical work is regarded as equivalent to one of recitative work.

First Term.	Mechanical.	Classical.	Second Term.	Mechanical.	Classical.
Business Law		1	Constitutional Law		1
Integral Calculus	4		Economics	3	3
Economics	3	3	English		4
French		5	French		5
English		4	French or German	3	
French or German	3		Latin		6
Graphic Statics	3		Machine Design	2 (4)	
Latin		6	Machine Work	(10)	
Machine Design	2 (2)		Psychology		3
Machine Work	(8)		Strength of Materials	3	
Psychology		3	Testing	(4)	

JUNIOR CLASS.

First Term.	Agricultural.	Gen'l Science.			Mechanical.	Classical.
		Biological.	Chemical.	Physical.		
Analytical Geometry				5	5	
Botany	2 (4)	2 (4)				
Agriculture	2 (2)					
Chemistry and Mineralogy			4 (10)	*4 (4)		
Civics		2	2	2	2	4
Drawing				*(4)	(4)	(4)
English	1	1	1	1	1	5 (1)
German	3	3	3	3	3	8
Invert. Zoology	2 (4)	2 (4)				
Latin						(6)
Physics		4 (4)	4 (4)	4 (4)	4 (4)	
Surveying	2 (3)			*2 (3)		2 (3)
Machine Work					(6)	
Horticulture	2					
Veterinary Science	2 (4)	2 (4)				
Second Term.						
Agriculture	2 (3)					
Botany	2 (4)	2 (6)				
Chemistry and Mineralogy			4 (10)	*4 (4)		
Civics		2	2	2	2	4
Descriptive Geometry					3	
Dif. Calculus				4	4	
Drawing				*4	4	
English	1	1	1	1	1	5 (1)
Entomology	1 (4)	1 (4)				
Gen. Zoology	2 (4)	2 (4)				
German	3	3	3	3		5
Horticulture	2					
Latin						(6)
Machine Work					(6)	
Physics		4 (4)	4 (4)	4 (4)	4 (4)	
Surveying	2 (3)			*2 (3)		2 (3)
Theory of Steam Engine					3	

*Note.—Students in Physical Course may elect Chemistry 4 (4) throughout the year, or Drawing (4) and Surveying 2 (3) throughout the year. Students in Agriculture may elect Chemistry 4 (4) in lieu of Botany throughout the year, upon consultation with the Heads of the Departments concerned.

SOPHOMORE CLASS.

First Term.	Agricultural.	General Science.	Mechanical.	Classical.
Agriculture	3 (4)			
Blacksmithing	(4)		(4)	
Botany	(4)	(4)		
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Drawing			(4)	
Elementary Biology	(4)	(4)		
Geometry	4	4	4	4
History		3		3
Horticulture	1			
Latin				5 (1)
Physics	3	3	3	3
Public Speaking	1	1	1	1
Rhetoric		4	4	4
Theoretical Mechanics			3	
Second Term.				
Agriculture	4 (4)			
Botony	(4)	(4)		
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Comp. Anatomy and Physiology	3 (2)	3 (2)		
Drawing			(6)	
Geometry and Trigonometry	4	4	4	4
German	4	4	4	4
History				3
Latin				5 (1)
Logic		3	3	3
Moulding and Casting			(6)	
Public Speaking	1	1	1	1

FRESHMAN CLASS.

First Term.	Agriculture.	General Science.	Mechanical.	Classical.
Agriculture	3 (4)	3 (4)		
Algebra	5	5	5	5
Drawing	(4)	(4)	(8)	(4)
English	5	5	5	5
Geology	3	3		
History				4
Latin				5 (1)
Physical Culture	(3)	(3)	(3)	(3)
Public Speaking	1	1	1	1
Technical Instruction			3	
Wood Work	(4)		(6)	
Second Term.				
Algebra	3	3	3	3
Drawing		(4)	(8)	
English	5	5	5	5
Geology	3	3		
Geometry	5	5	5	5
History				4
Horticulture	3 (6)	3 (6)		
Latin				5 (1)
Physical Culture	(3)	(3)	(3)	(3)
Public Speaking	1	1	1	1
Technical Instruction			2	
Wood Work			(6)	

Note.—Students pursuing General Science course may elect Latin in place of Agriculture and Horticulture.

REQUIREMENTS FOR ADMISSION.

For admission to the College Department—Freshman class—an entrance examination is required. This examination will be held at the College on September 20th, 21st, 22nd, 1901. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic (complete), algebra (as far as quadratics), political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic (as far as percentage), United States history and political geography.

Every applicant for admission to the College must bring satisfactory testimonials as to character and previous scholarship, from one or more persons qualified so to speak—his former teacher, pastor or neighbor, acquainted with his general reputation. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Applicants having completed the eight grades of the grammar school course, upon presentation of a certified copy of the final report showing record of work completed and certificate of satisfactory deportment from the teacher in charge, may be admitted to Freshman Class without further examination.

Graduates of standard high schools under similar conditions may be admitted to the Sophomore Class. It must be understood that all such assignments are made conditioned upon the applicant's demonstrating his fitness to bear the responsibilities assumed. Promotions and reductions will be made in six weeks after the resumption of the regular exercises, as the individual cases may require.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the college for promotion to such classes, or must present certificates from county or city schools covering the work of the lower college classes as hereinbefore stated.

EXAMINATION AND PROMOTION.

In order to pass from one class to the next higher class a student is required to pass the yearly examination by a mark of at least sixty per cent. in each study, and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year.

It has been found necessary to make some regulations to provide for cases of using unfair means in examinations. The faculty, therefore, has agreed upon the following rule, which will be rigidly adhered to: "Any student detected in so doing will be required to surrender his papers, and will not under any circumstances be given another examination in that particular study."

SCHOLARSHIPS.

The College offers a number of scholarships—three for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties, by the County Examiner. All scholarship students must be prepared for entrance to the Freshman class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of student expenses. The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present them-"selves at the college, or other designated place, at the date which "may be named, in the September or January next following the "award, and be examined by College authorities for entrance to the "Freshman class. Alternates are to be thus examined, as well as prin-"cipals, and in case of a failure of the principal to secure or hold the "scholarship, the alternate will have the first right to the place, if "within a year from date of the certificate of award.

"Persons holding certificates of scholarship, must, in order to se-"cure the same, pass the entrance examination of the College, and (if "entering in January) such other examination as may be required to "join *the Freshman class*. Every one must declare his intention of "completing the prescribed course of study of the College, in either "Agriculture or Mechanical Engineering, provided he retains his "Scholarship, and must make an advance payment of $15 on the year's "account. And to hold a scholarship, the student must make the sub-"sequent payments and meet such requirements of the College as to "scholarship and deportment, as may be prescribed by the President "and faculty. By passing special examinations, candidates for scholar-"ships may be permitted to enter the Sophomore class."

DISCIPLINE AND REGULATIONS.

1. The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of cadets. The final authority, however, in all cases, is the President of the College.

2. All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be truthful under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of these rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the key-note of student government. Failure in duty means, necessarily, forfeiture of confidence and trust.*

3. Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offences the punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

4. A special pledge to refrain from what is popularly known as "Hazing" is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that a failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal.*

5. *Frequent absences from the college are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.*

6. Three reports are sent to each parent during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

DAILY TRUMPET CALLS.

First Call for Reveille	6.30 A. M.
Reveille	6.35 A. M.
Assembly, Roll Call	6.40 A. M.
Breakfast	6.55 A. M.
Assembly, Roll Call	7.00 A. M.
Chapel	7.25 A. M.
Sick Call	7.40 A. M.
Recitation	7.55 A. M.
Drill	11.10 A. M.
Assembly, Roll Call	11.15 A. M.
Recall	11.45 A. M.
Guard Mounting	11.50 A. M.
Assembly, Roll Call	11.55 A. M.
Adjutant's Call	12.00 M.
Dinner	12.15 P. M.
Assembly, Roll Call	12.20 P. M.
Recitations	12.55 P. M.
Supper	5.55 P. M.
Assembly, Roll Call	6.00 P. M.
Retreat	7.20 P. M.
Assembly, Roll Call	7.30 P. M.
Tattoo	10.00 P. M.
Tapps ....Lights Out	11.00 P. M.

STUDENT EXPENSES.

The expenses of the college year for the several classes of students are as follows. No reductions are made for regular vacations.

REGULAR STUDENTS.

Board, heat, light, room and books	$150.00
Laboratory fee, each laboratory used	6.00
Physician's fee	4.00
Breakage fee	5.00
Total cost	$165.00

SCHOLARSHIP STUDENTS.

Board, heat, light, room and books	$ 70.00
Laboratory fee, each laboratory used	6.00
Physician's fee	4.00
Breakage fee	5.00
Total cost	$ 85.00

DAY STUDENTS.

Room, heat and books	$ 24.00
Laboratory fee, each laboratory used	6.00
Breakage fee	5.00
Total cost	$ 35.00

TIME OF PAYMENT.

For Regular Students:—

$40.00 (and the fees) on entrance; $40.00 on November 15th; $40.00 on February 1st; $30.00 on April 1st.

For Scholarship Students:—

$35.00 (and the fees) on entrance; $35.00 on February 1st.

For Day Students:—

$12.00 (and the fees) on entrance, and $12.00 on February 1st.

Promptness in Payment is Insisted Upon.

EXPLANATION OF FEES.

The laboratory fee is intended to cover the cost of the materials and apparatus consumed by the student in practical laboratory work.

The physician's fee is to provide for the attendance of the regular College physician in all ordinary cases of sickness.

The breakage fee is to cover all losses to the College caused by careless breakage or other damage to property by the students. Each loss is divided proportionately among the students, and the unused balance of each fee refunded at the close of the year. In case the loss is known to be caused by any particular student, the whole amount is charged to his account.

Except in cases of extended illness, no money will be refunded for long-continued absence or withdrawal from the College.

Students entering late in the session will be charged according to the date of entrance. No allowance will be made for less than one month.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white collars, uniform.
6 pair white gloves, uniform.
6 pair white cuffs, uniform.
1 pair blankets (for single bed).
3 pairs sheets (for single bed).
4 pillow cases.
2 blue bed-spreads, uniform.
6 towels.
1 chair, uniform.
1 pillow.
1 mattress (shuck) cotton top.

The room-mates together purchase the following articles:—

1 set of lamp fixtures, uniform.
1 pitcher and basin, uniform.
2 table-cloths, uniform.
1 broom.
1 looking-glass.
1 slop-jar (porcelain).

All the articles marked uniform in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances. Any excess will be returned promptly.

UNIFORM.

The cadet uniform, of substantial grey cloth, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. The cost of the entire outfit—coat, trousers and cap, is $16.00. Parties coming through Baltimore can leave measures and orders with the New York Clothing House, 102-104 E. Baltimore St. *Payment must be made for this at time of entrance. This is imperative. The firm requires it.*

SHORT WINTER COURSE IN AGRICULTURE—COMMENCING JANUARY 6th, 1902.

A ten weeks' course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on Agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four years' course; this solves the problem for them.

SYNOPSIS OF THE COURSE.

Farm Crops and Cultivation of the Soil, eight lectures; Drainage, five lectures; Breeds of Stock and Principles of Breeding, ten lectures; Stock Feeding, eight lectures; Manures, five lectures; Tobacco, six lectures; Dairy Husbandry and Dairy Chemistry, ten lectures; Horticulture, fifteen lectures; Agricultural Chemistry, five lectures; Plant Physiology, five lectures; Sanitary Science, five lectures; Economic Entomology, five lectures; Farm Accounts, six lectures; Farm Buildings and Bridge Construction, eight lectures; Carpentry and Blacksmithing, ten exercises; Veterinary Science, fifteen lectures; Citizenship, ten lectures.

NO EXPENSE FOR TUITION, USE OF LABORATORIES OR SUPPLIES.

Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within short distance of College and Experiment Station. A limited number can be accommodated at College for $4.00 per week. Electric cars make frequent connections.

APPRENTICESHIPS IN AGRICULTURE.

The Agricultural Experiment Station, instead of having all the work in the dairy and horticultural divisions performed by regularly paid laborers, has some performed by apprentices. The apprenticeships in these divisions have been established with five objects in view, viz.: 1st. In order to offer to young men who have a good common school education, and who have not the means for taking either a regular college course, or even a short course, an opportunity to become trained and skilled laborers in the dairy or some class of horticultural work. 2nd. In order to enable young farmers to take up and engage in some of the specialties in farming on their own farms in an intelligent manner. 3rd. In order to supply some of the numerous applications that come to the College and Station for skilled help of the character indicated. 4th. In order to give the College and Station a nucleus for the extension of their work and a more appreciative constituency. 5th. In order to have some of our labor performed by persons who have more interest in what they are doing than the money they are to receive.

These apprenticeships are open to farmers' sons on the following terms: The Station will board and room the apprentice or pay the equivalent in money as preferred. The Station will furnish the instruction and facilities for instruction given in the several branches pertaining to the specialty taken up.

Those serving a dairy apprenticeship will be expected to devote from three to five hours of each day in receiving class-room instruction, and in study, besides the time devoted to practice in the skilled operations. It is expected that apprentices shall become thoroughly familiar with the scientific feeding of dairy stock, and with all the modern practices pertaining to dairy and creamery management. The plan pursued is to divide the work which would ordinarily be performed by one laborer among three apprentices.

A dairy apprentice is expected to stay at the Station for six months. The horticultural apprentice is to serve for one year on the same terms as the dairy apprentice. The instruction taken in this division will be given at the same time, and with short course students of the College. The horticultural apprentice will be expected to take part in all classes of the work of this division, but he may specialize, so as to become specially skilled in either large fruits, small fruits, truck crops, floriculture, nursery management, green-house management or spraying. The apprentices shall have access to the libraries and reading-rooms of the Station at all hours.

The Station can accommodate but a limited number of apprentices, and vacancies will be filled in the order in which applications for the same are received.

After an apprentice has served his time, should a position be desired by him, we will take pleasure in recommending him to a place whenever we have a request for skilled help in that particular line, provided that such apprentice has proven himself worthy. So far we have had more applications for skilled help on farms and in creameries than we have been able to supply.

Make applications and requests for further information to

H. J. PATTERSON,
Director of the Maryland Agricultural Experiment Station,
College Park, Md.

SUMMER SCHOOL.

The Summer School, organized during the summer of 1901, by this College, supplies a long-felt want to the teachers of the State. Heretofore it has been necessary for teachers desiring a special course during the summer vacation, to go to Cornell or Chatauqua Lake, or some other place equally remote. The revival in matters of public education throughout the State has created a demand for a school where teachers may spend a month in the summer, and, at a small expense, pursue such branches as Nature Studies, Drawing and Physical Culture, thus equipping themselves more thoroughly for the duties of their profession, and at the same time getting the benefit to be derived from the recreation and social intercourse of a month's sojourn in the country.

The Agricultural College is in every respect suitable for a Summer School. It is situated upon an eminence overlooking a wide extent of country, and is surrounded by magnificent shade trees and a profusion of plants and flowers. The botanical, entomological, horticultural, chemical and physical culture departments are thoroughly equipped, and the State Experiment Station offers a magnificent field to those interested in nature studies.

The College is situated about thirty-two miles from Baltimore, and eight miles from Washington, on the B. & O. R. R., and electric cars are running to and fro between the College and Washington at frequent intervals. The Art Galleries, Museums, Libraries and National buildings of Washington City are in themselves of incalculable benefit to the student. The tennis courts and other play grounds give ample opportunity for physical recreation.

The regular instructors are the members of the faculty of the Maryland Agricultural College. Prominent lecturers will be secured from Washington, Johns Hopkins University and other sources, as the occasion demands. The session just closed had seventeen attendants, and was a gratifying success.

While primarily designed for teachers, the School is open to any one who may desire a course in Botany, Entomology, Horticulture, Agriculture, Anatomy, Chemistry, Drawing, Physical Culture and the common English branches.

The fact that the College Trustees have allowed the use of the buildings and equipments free of charge has made it possible to place the cost of board and tuition at such a low figure as brings the Summer School within the reach of all. Indeed, the conditions are such that a teacher may take a month's course at the Maryland Summer School at no greater expense than would be required for board alone at any summer resort.

For particulars regarding any matter hereinbefore set forth, address

R. W. SILVESTER,

Maryland Agricultural College,

College Park, Md.

Express Office, College Station, B. & O. R. R.
Telegraph and Telephone Stations, Hyattsville, Md.
Postoffice, College Park, Md.

THE ALUMNI ASSOCIATION.

The growth of the Alumni Association during the past year, is a source of great satisfaction to the officers of the College and of the Association. Through the efforts of its officers a banquet was held at the College in April this year. Renewed interest was shown by the existing members of the Association, and the occasion was marked by a large increase in the membership, recruited largely from the older graduates of the College.

All indications point to a great advance in the growth of the organization, and now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. At its regular annual meeting in June, it was decided that the Association would continue its offer of medals for proficiency in three of the departments of College work. By restricting the competition for the medal to be awarded for the best paper on "Agricultural Science" to those students pursuing original research, it is intended and hoped, by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

It will be a source of gratification to the members of the Association to note the action of the Board of Trustees of the College with reference to the holding of scholarships in the College. One year ago the Association passed a resolution looking to the restriction of the holders of the State Scholarships to the Agricultural and Mechanical courses in the College. This was with the idea of carrying out more completely the ideas of the founders of the College, in establishing a school for instruction in Agriculture and the Mechanic Arts. At the last meeting of the Board of Trustees an order was passed putting the restriction in full operation. It is along this and similar lines that the Association has a broad field provided in which to exert its efforts; and as it increases in strength, it may be expected to make its influence felt for the advancement of the interest and welfare of the College.

The officers of the Association for the ensuing year are: President, F. B. Bomberger, '94; Vice-President, J. Enos Ray, '92; Secretary-Treasurer, J. R. Laughlin, '96; members-at-large of the Executive Committee, F. P. Veitch, '92, and T. M. Price, '99.

Graduates and members of the Association are requested to keep the Secretary-Treasurer informed of any changes in their addresses. Any information concerning the older graduates, which will enable the officers to locate and communicate with them, will facilitate their efforts, and will tend to further the success of the Association.

Address of the Secretary-Treasurer:—J. R. Laughlin,
College Park, Md.

LETTER FROM DEPARTMENT OF AGRICULTURE.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving a compensation which will enable them to pay all expenses. This offer, on the part of the Department of Agriculture, is greatly appreciated, and will, no doubt, be availed of by many attending the Land-Grant Colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:

"Department of Agriculture, Washington, D. C.,

"June 27th, 1899.

"Dear Sir:—In my annual report to the President for 1898, I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post-graduate studies in connection with work in the scientific division of this department, as far as practicable. In pursuance of this policy, I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as "Scientific Aids" on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support, in the preparation of their graduates for posts of usefulness in this department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope, therefore, that the effort which I am now making in this direction will be but a beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high-grade scientific work. It will, of course, be understood that under present conditions the Department can only admit a very limited number of scientific aids. Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualifications for aiding in the work of the department now in progress.

In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission.

"Very respectfully,

"JAMES WILSON,
"Secretary Agriculture."

To R. W. Silvester, President, College Park, Md.

SCIENTIFIC AID.

DEPARTMENT OF AGRICULTURE.

August 1st, 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of Scientific Aid, Department of Agriculture.

The examination will consist of the subjects mentioned below which will be weighted as follows:—

	Subjects.	Weights.
1.	College Course with Bachelor's Degree	50
2.	Post-graduate course and special qualifications	25
3.	Thesis or other literature	25
	Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commission prior to the hour of closing business, on August 1st, 1900 their statements and other material which will be required as specified in a special form which will be furnished them by the Commission, together with application blank (Form 304) in order to have their names entered upon the register which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to August 1st, 1900, may file them at any subsequent time, when they will be rated and the names of those attaining eligible averages will be entered upon the register.

For the information of applicants, the following statement is made, as received from the Secretary of Agriculture.

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.

2. Each applicant must file with the United States Civil Service Commission, Washington, D. C., a properly certified statement as to the length of time spent in College, the studies pursued, the standing in these studies, the special work it is desired to take up and the special qualifications for such work, and finally, a thesis upon such scientific subjects as the applicant may select, or in lieu of this, any literature on scientific subjects over his own signature.

3. The length of time any scientific aid may serve in the Department is limited to two (2) years.

4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified, without regard to any consideration, save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blanks (Form 304) and special forms.

DONATIONS TO LIBRARY.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey; Weather Service and Highway Commission, Department of Agriculture, Washington, D. C.; County Press—Valuable addition of their publications.

STUDENT ORGANIZATIONS AND OPPORTUNITIES.

Student Clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and College pride and developing an esprit de corps among the students.

Each class has its own organization, in which matters relating to class work are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline and tends to raise the standard of student honor.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

C. N. Bouic, President. L. E. Mackall, Vice President.
P. L. Peach, Secretary. T. B. Symons, Treasurer.
Prof. C. S. Richardson, Advisory Officer.

Most encouraging work has been done by this organization during the past year, and much interest has been shown in both the private and public meetings.

THE ATHLETIC ASSOCIATION.

W. W. Cobey, President. H. C. Whiteford, Vice President.
F. H. Peters, Secretary. J. T. Hardisty, Treasurer.

In this organization an excellent record was made in Foot Ball and Base Ball, and in track and field events.

LITERARY SOCIETIES.

Officers of the "NEW MERCER" Literary Society.

J. T. Hardisty, President. L. E. Mackall, Vice President
R. L. Mitchell, Secretary-Treasurer. P. L. Peach, Editor.
J. M. Matthews, Sergeant-at-Arms.

Officers of the "MORRILL" Literary Society.

W. W. Cobey, President. H. C. Whiteford, Vice President.
S. P. Darby, Secretary-Treasurer. J. I. Wisner, Editor.
H. N. Lansdale, Sergeant-at-Arms.

These societies are invaluable adjuncts to College work. Through them a good knowledge of parliamentary law is gained as well as a readiness of expression and activity in thought,—qualities particularly valuable to the American citizen.

THE ROSSBURG CLUB.

J. T. Hardisty, President. W. W. Cobey, Vice President.
H. C. Whiteford, Secretary-Treasurer.

The social man is a necessity,—hence this organization is encouraged and supported by the President and Faculty. The entertainments of the same have been marked by an esprit which emphasizes the wisdom of its continuance and encouragement.

STUDENT OPPORTUNITIES.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed are always given the preference. The compensation in all cases is fixed at 10 cents per hour.

MEDALS AWARDED.

COMMENCEMENT 1901.

Senior Class, President's Medal Gold Medal, for Highest Standing for Entire Year.	W. W. Cobey.
Junior Class, President's Medal Gold Medal, for Highest Standing in Junior Year.	A. R. Hirst.
Alumni Medal Gold Medal, for Best Debater in Competitive Debate.	F. V. McDonnell.
Trustees' Medal Gold Medal, for Best Essay on "American Citizenship."	W. W. Cobey.
Commandant's Prize Gold Watch, for Highest Standing in Military Department.	W. W. Cobey.
Commandant's Prize Gold Scarf Pin, for Neatest Set of Equipments.	Joseph Coudon.

ATHLETIC MEDALS.

100 Yard Dash	J. M. Matthews.
220 Yard Dash	E. D. Dickey.
440 Yard Run	H. K. Bradford.
120 Yard Hurdle	H. K. Bradford.
880 Yard Run	E. D. Dickey.
Broad Jump	J. M. Matthews.
Tennis Tournament	J. D. Bowman.

GRADUATES OF 1901 AND DEGREES CONFERRED.

SUBJECT OF THESES.

William Wilfred Cobey.................Crayton, Charles Co., Md
"The Tobacco Industry of Maryland."

John Thomas Hardisty ....Collington, Prince George's Co., Md.
"The Industrial Development of the United States."

Fredus Vance McDonnell.............................Florence, Pa.
"The Blacksmith Automatic-Feed Drill Press."

Henry Campbell Whiteford..........Whiteford's, Harford Co., Md.
"The Life History of the Dodder."

GRADUATE DEGREES.

M. T. Sudler, M. S.	Baltimore, Md.
Sothoron Key, M. S.	Washington, D. C.
F. B. Bomberger, A. B.	Hagerstown, Md.
H. J. Kefauver, A. B.	Frederick, Md.

MILITARY DEPARTMENT ROSTER.

Commandant, Major J. C. Scantling.
U. S. A. Retired.

CADET BATTALION.

FIELD AND STAFF.

T. B. Symons	Cadet Major.
J. Coudon	First Lieutenant and Adjutant.
L. E. Mackall	First Lieutenant and Quartermaster.
L. M. Ewell	Sergeant Major.
G. W. Cairnes	Principal Musician.
W. S. Hull	Chief Trumpeter.

COMPANY OFFICERS.

Company "A."	Company "B."	Company "C."
	CAPTAINS.	
S. P. Darby.	J. D. Bowman.	R. L. Mitchell.
	FIRST LIEUTENANTS.	
F. H. Peters.	J. I. Wisner.	H. N. Lansdale.
	SECOND LIEUTENANTS.	
A. R. Hirst.	W. S. Fendall.	E. C. Palmer.
	FIRST SERGEANTS.	
R. Hamblin.	E. P. Walls.	P. L. Peach.
	SERGEANTS.	
Cadet R. B. Mayo.	Corp. S. B. Nichols.	Corp. H. D. Watts.
Corp. J. C. Cockey.	Cadet C. P. Page.	Cadet J. M. Warfield.
Corp. W. C. Ort.	Cadet C. N. Bouic.	Corp. E. R. Ewell.
	CORPORALS.	
Corp. J. M. Matthews	Cadet W. Mitchell.	Cadet E. Garner.
Cadet J. M. Turner.	Cadet A. P. Deaner.	C'd't C. W. Thornton
Cadet G. L. Sincell.	Cadet R. P. Choate.	Cadet D. E. Brown.
	TRUMPETERS.	
W. W. Fenby.	L. W. Cruikshank.	H. A. Weiller.
J. C. Rutledge.		R. Collins.

ROSTER OF STUDENTS.

SESSION 1900-1901.

SENIOR CLASS.

Cobey, W. W.	Grayton, Md.
Hardisty, J. T.	Collington, Md.
McDonnell, F. V.	Florence, Pa.
Whiteford, H. C.	Whitefords, Md.

Total 4.

JUNIOR CLASS.

Bowman, J. D.	Hyattstown, Md.
Bradford, H. K.	Washington, D. C.
Coudon, J.	Perryville, Md.
Darby, S. Porter	Sellman, Md.
Fendall, W. S.	Towson, Md.
Hirst, A. R.	Cambridge, Md.
Lansdale, H. N.	Damascus, Md.
Mackall, L. E.	Mackalls, Md.
Mitchell, R. L.	La Plata, Md.
Palmer, E. C.	Washington, D. C.
Peters, F. H.	Wesley, Md.
Symons, T. B.	Easton, Md.
Wisner, J. I.	Baltimore, Md.

Total 13.

SOPHOMORE CLASS.

Anderson, J. A.	Deal's Island, Md.
Bouic, A. M.	Rockville, Md.
Bouic, C. N.	Rockville, Md.
Bradley, T. C.	Washington, D. C.
Cairnes, G. W.	Jarrettsville, Md.
Collier, J. P.	Ellicott City, Md.
Dickey, E. DuV.	Washington, D. C.
Dunbar, E. B.	Springville, N. Y.
Ensor, J. G.	Bellfast, Md.
Ewell, L. M.	Baltimore, Md.
Fitzhugh, A. C.	Baltimore, Md.
Garner, E.	Rosaryville, Md.
Gatch, E. W.	Gardenville, Md.
Hamblin, R.	Wango, Md.
Hinmann, W. C.	Lower Marlboro, Md.
Hopkins, I. C.	Halls, Md.

SOPHOMORE CLASS (Continued).

Loker, H.	Leonardtown, Md.
Matthews, J. M.	Dulaney's Valley, Md.
Mayo, R. W. B.	Hyattsville, Md.
McComas, G. W.	Singer, Md.
Merritt, J. B.	Easton, Md.
Ort, W. C.	Midland, Md.
Page, C. P.	Frederick, Md.
Peach, P. L.	Mitchellsville, Md.
Smith, E. H.	Govanstown, Md.
Stone, R. D.	Washington, D. C.
Walker, F. B.	Easton, Md.
Walls, E. P.	Barclay, Md.
Young, F. J.	Bristol, Tenn.

Total 29.

FRESHMAN CLASS.

Broch, Leon	Havana, Cuba.
Brown, D. E.	College Park, Md.
Brown, J.	Branchville, Md.
Bryan, T. E.	Centreville, Md.
Burnside, H. W.	Hyattsville, Md.
Calderon, G. A.	Lima, Peru.
Calderon, M. A.	Lima, Peru.
Candamo, Y. V.	Lima, Peru.
Carr, M.	Hyattsville, Md.
Cartwright, T. J.	College Park, Md.
Choate, R. P.	Randallstown, Md.
Cockey, J. C.	Gwynnbrook, Md.
Cruikshank, L. W.	Cecilton, Md.
Cruikshank, T. C.	Cecilton, Md.
Darby, I.	Gaithersburg, Md.
Deaner, T. A. P.	Boonsboro, Md.
Dent, W. G.	Oakley, Md.
Elgin, B. K.	Brunswick, Md.
Elgin, J. H.	Brunswick, Md.
Ewell, E. R.	Baltimore, Md.
Gassoway, J. H.	Germantown, Md.
Gourley, T. A.	Birch, Md.
Gray, J. P.	Glyndon, Md.
Hall, A. L.	Allegheny, Pa.
Hopkins, J. S.	New Market, Md.
Jones, F. A.	Comus, Md.
Kehoe, J. G. C.	Washington, D. C.
Lewis, J. R.	Lewisville, Md.

FRESHMAN CLASS (Continued).

Mayo, E. C.	Hyattsville, Md.
Meikle, R. J.	Baltimore, Md.
McCubbin, L. C.	Chevy Chase, Md.
Mitchell, W.	La Plata, Md.
Mullendore, T. B.	Trego, Md.
Nichols, S. B.	Germantown, Md.
Price, L.	Hyattstown, Md.
Rolph, W. C.	Beltsville, Md.
Sasscer, E. R.	La Plata, Md.
Sincell, G. L.	Oakland, Md.
Streett, J. McL.	The Rocks, Md.
Thornton, C. W.	Taylor, Md.
Turner, J. McL.	Taylor, Md.
Underwood, E. J.	Accokeek, Md.
Warfield, J. N.	Florence, Md.
Watts, H. D.	Bel Air, Md.
Watts, H. F.	Bel Air, Md.
Webster, F. O.	Baltimore, Md.
Wentworth, G. L.	Washington, D. C.
Williams, J. H.	Easton, Md.

Total 48.

PREPARATORY CLASS.

Bay, J. H.	Jarrettsville, Md.
Beall, H. R.	Frostburg, Md.
Byron, W. H.	Williamsport, Md.
Cockey, A. D.	Gwynnbrook, Md.
Collins, R.	Washington, D. C.
Crone, W. M.	St. Michaels, Md.
Daniels, J.	College Park, Md.
Dorsey, B. S.	Mt. Airy, Md.
Downey, C. A. L.	New Market, Md.
Duker, H. S.	Baltimore, Md.
Emory, F. A.	Centreville, Md.
Evans, H. H.	Rolph's, Md.
Farrall, F. C.	La Plata, Md.
Fenby, W. W.	Avondale, Md.
Gathmann, O.	Washington, D. C.
Gathmann, P.	Washington, D. C.
Gill, H. K.	Butler, Md.
Green, E. F.	Wye Mills, Md.
Hull, W. S.	Baltimore, Md.
Kehoe, C. A. W.	Washington, D. C.
Lee, J. B.	Hyattsville, Md.

PREPARATORY CLASS (Continued).

Masvidal, R.	Havana, Cuba.
Naylor, R. E.	Washington, D. C.
Orme, H.	Washington, D. C.
O'Farrill, L. B.	Havana, Cuba.
Payne, T.	Frostburg, Md.
Phillips, F. F.	Centreville, Md.
Power, E.	Derwood, Md.
Richards, J. R.	Baltimore, Md.
Riggs, D.	Laytonsville, Md.
Rossi, Lusto	Puerto Principe, Cuba.
Rutledge, J. C.	Taylor, Md.
Shepherd, E. L.	Bristol, Md.
Weiller, H. A.	Catonsville, Md.
Williar, H. D.	Baltimore, Md.
Purnell, L. W.	Snow Hill, Md.

Total 36.

SPECIALS.

Calderon, A. A.	Lima, Peru.
Darby, S. P.	Sellman, Md.
Gibson, A. E.	Springfield, Mass.
Hemler, P. L.	Taneytown, Md.
Loar, C. W.	Vale Summit, Md.
Miller, O. S.	Gortner, Md.
Murray, J. D.	Elkridge, Md.
Nichols, S. B.	Germantown, Md.
Warfield, J. N.	Florence, Md.
Williams, J. H.	Easton, Md.
Worthen, G. C.	East Lexington, Mass.

Total in all Classes 138.

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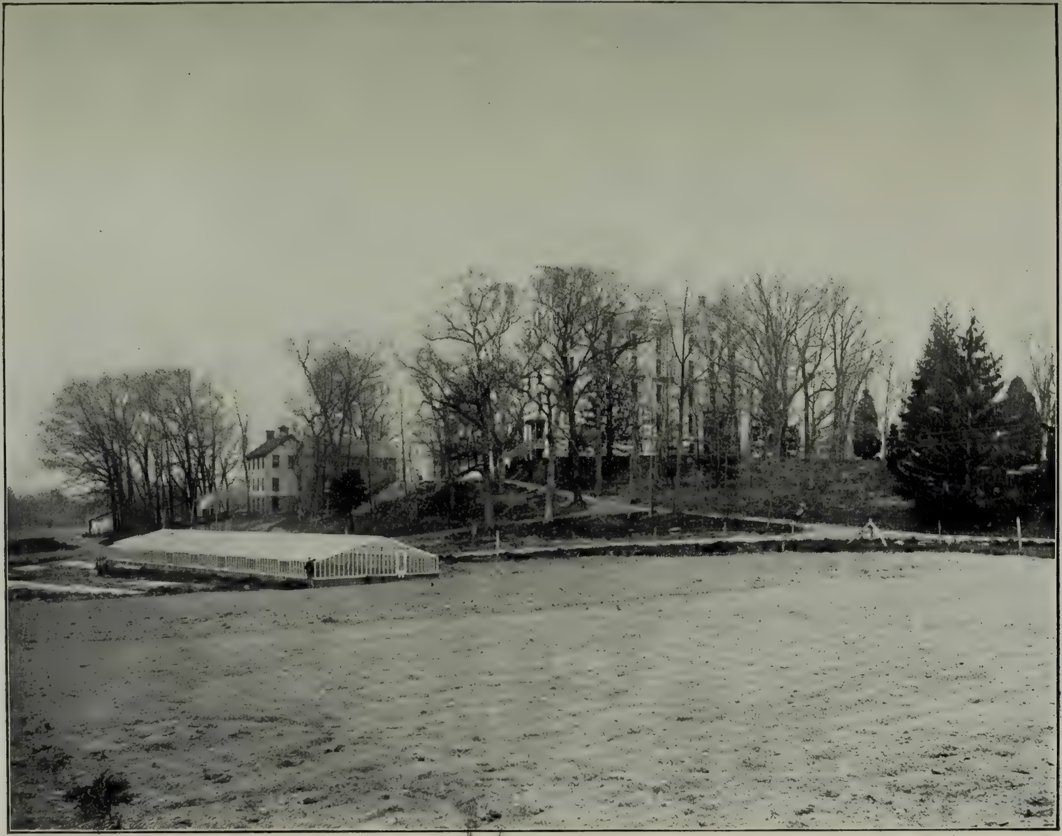
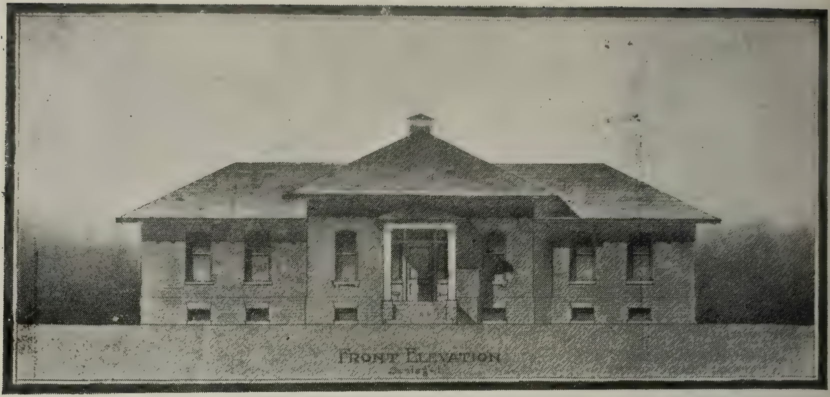
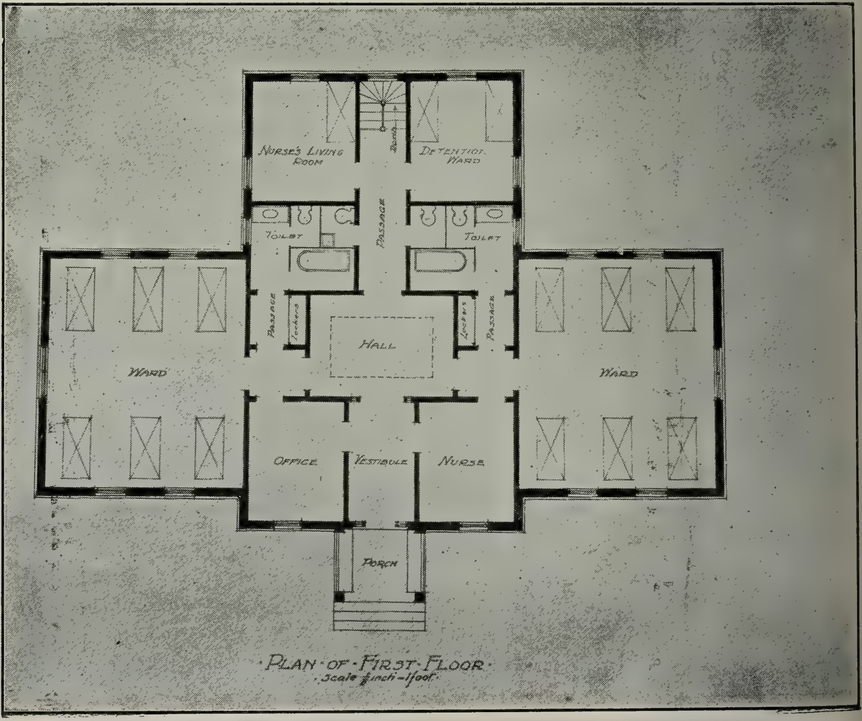


VIEW OF GREENHOUSES AND BARRACKS.



INFIRMARY.



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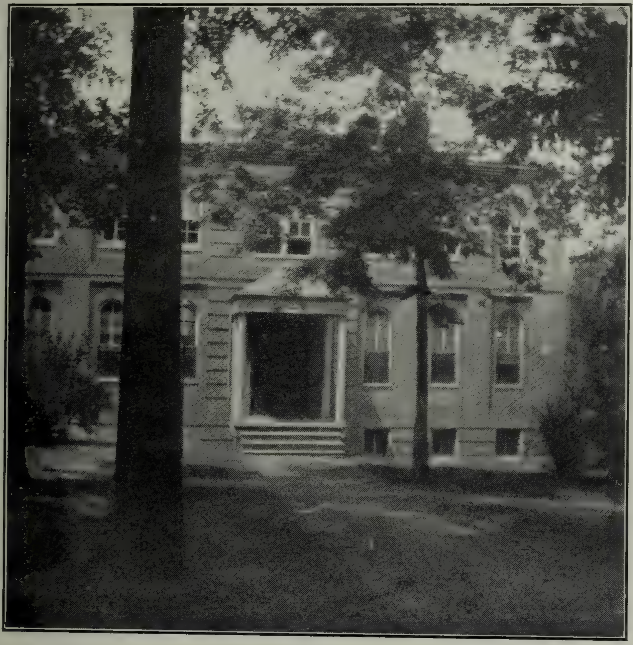
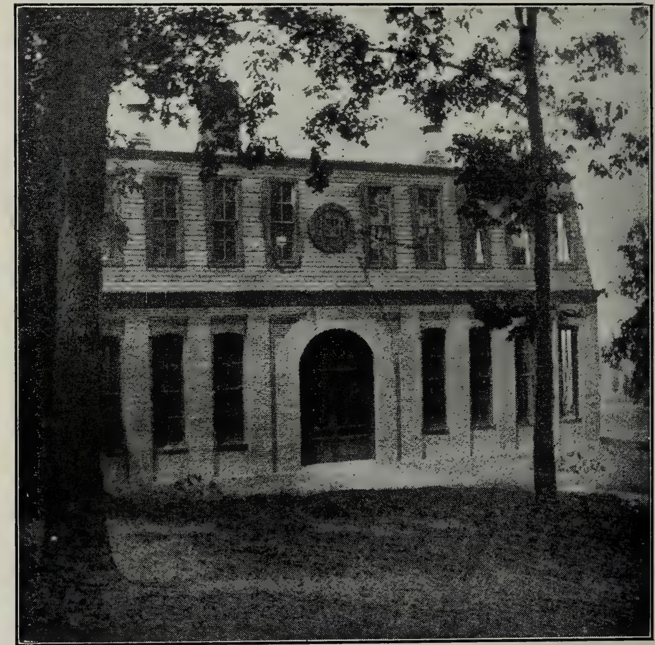


CHEMICAL LABORATORY.



MECHANICAL BUILDING.

A MODEL BARN.

PRIVATE LABORATORY.

DRAFTING ROOM.

BOTANICAL LABORATORY.

STAFF.

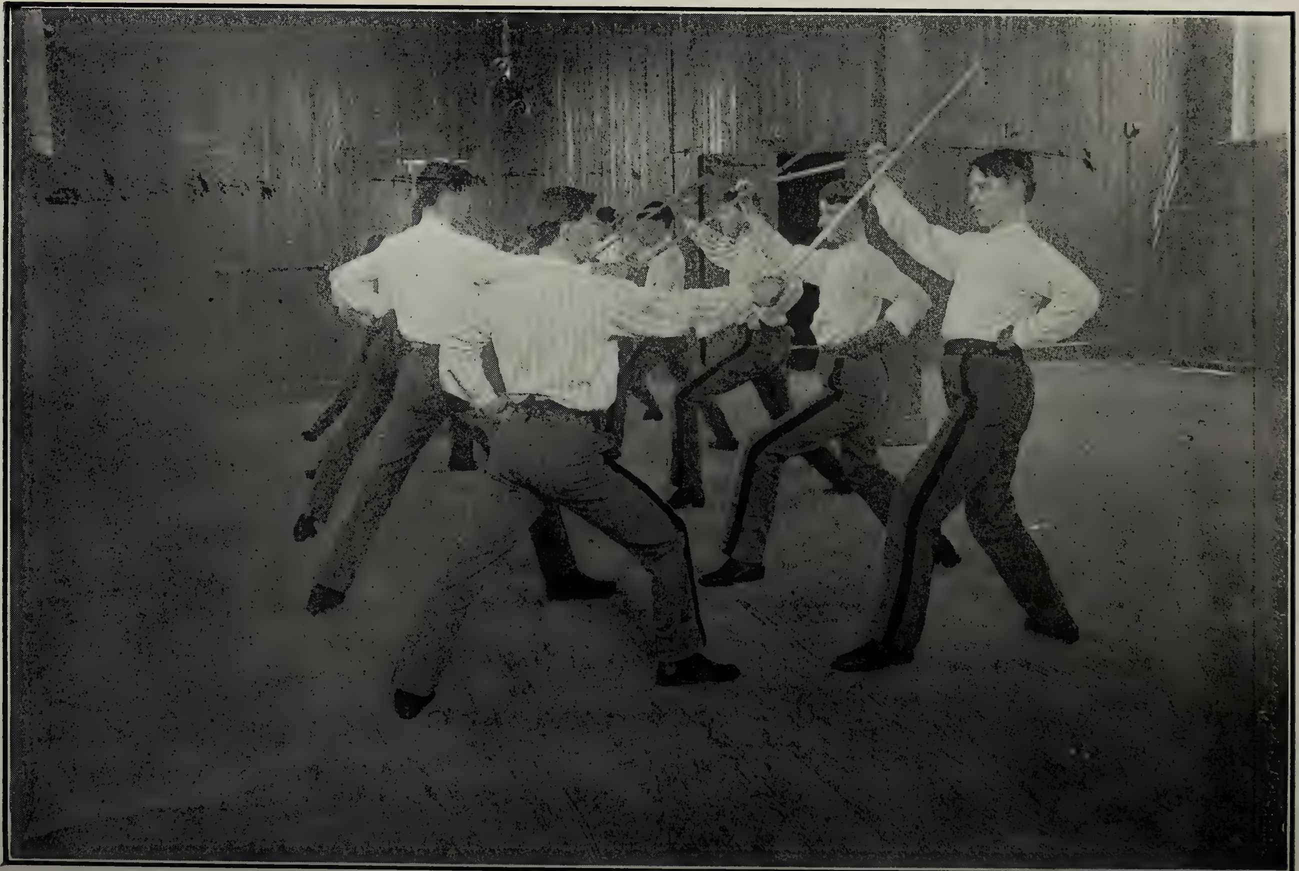
Major W. W. Cobey. First Lieutenant and Adjutant T. B. Symons. Sergeant-Major R. L. Mitchell.

THE BATTALION

ARTILLERY DRILL.

PHYSICAL TRAINING.

CLASS IN PHYSICAL CULTURE.

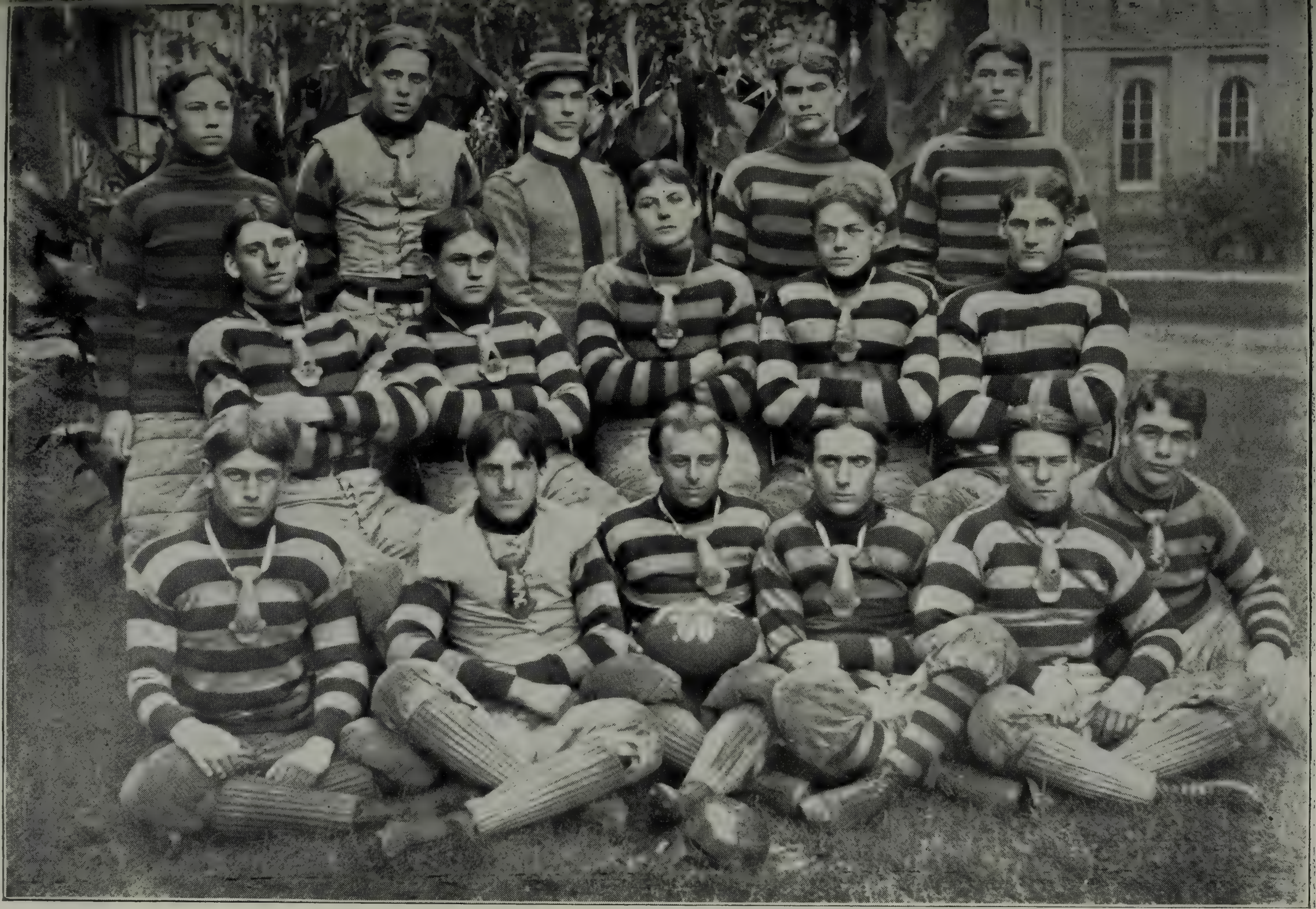


CLASS IN FENCING.

TRACK AND FIELD TEAM.

CLASS OF 1902.

CLASS OF 1904.



FOOT BALL TEAM.

MAC

MANDOLIN AND GLEE CLUB

A GROUP OF THE SUMMER SCHOOL.

UNIVERSITY OF ILLINOIS
PRESIDENT'S OFFICE

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Maryland Agricultural College Catalogue

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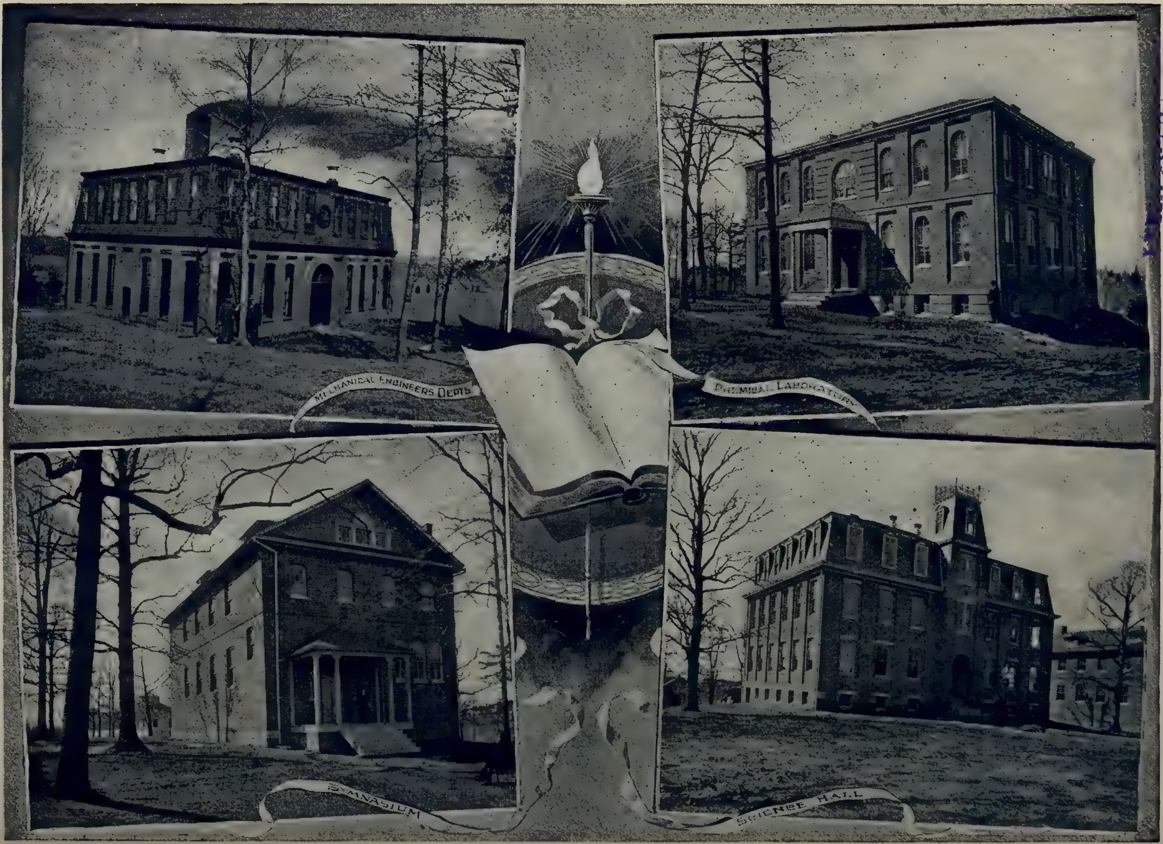
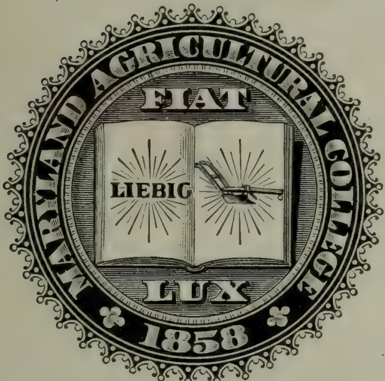

MECHANICAL ENGINEERS DEPTS
CHEMICAL LABORATORY
GYMNASIUM
SCIENCE HALL

UNIVERSITY OF ILLINOIS

PRESIDENT'S OFFICE

THE
MARYLAND
AGRICULTURAL COLLEGE,

COLLEGE PARK, MARYLAND.



CATALOGUE.

YEAR 1902-'3.

Persons wishing to receive the College Catalogue or desiring any information concerning the College or its work may address

PRESIDENT R. W. SILVESTER,
Maryland Agricultural College,
College Park, Md.

C. & P. Telephone, Hyattsville, 43.
Telegraph Station, Hyattsville, Md.
Express Office, College Station, B. & O. R. R.

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Hon. J. W. Hering	Comptroller of the Treasury.
Hon. Isidor Rayner	Attorney-General.
Hon. Murray Vandiver	State Treasurer.
Hon. John Hubner	President of the Senate.
Hon. Noble L. Mitchell	Speaker of the House of Delegates.

Members Representing Stockholders.

Allen Dodge, Esq	Washington, D. C.
Chas. B. Calvert, Esq	College Park, Md.
Chas. H. Stanley, Esq	Laurel, Md.
E. Gittings Merryman, Esq	Cockeysvile, Md.
J. Harold Walsh, Esq	Upper Falls, Md.

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J. M. Monroe, Esq., Anne Arundel Co., Md	Term	expires	1904.
Hon. Chas. H. Evans, Baltimore, Md	"	"	1904.
C. J. Purnell, Esq., Snow Hill, Md	"	"	1906.
Hon. David Seibert, Clear Spring, Md	"	"	1906.
Chas. W. Slagle, Esq., Baltimore, Md	"	"	1908.
Chas. A. Councilman, Esq., Glyndon, Md	"	"	1908.

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Committee on Agriculture.

Messrs. Stanley, Vandiver, Slagle, Seibert, Councilman, Dodge and Mitchell.

Committee on Finance.

Messrs. Vandiver, Stanley, Walsh, Monroe and Dr. Hering.

Committee on Education.

Messrs. Evans, Walsh, Dr. Hering and Hubner.

Committee on Facilities for Instruction.

Messrs. Monroe, Rayner, Calvert and Purnell.

Committee on Auditing.

Messrs. Vandiver, Stanley and Slagle.

Committee on Eastern Branch.

Messrs. Slagle, Purnell and Merryman.

Committee on Buildings and Grounds.

Messrs. Councilman, Calvert, Slagle, Stanley and Evans.

Committee on Executive Matters.

Messrs. Stanley, Vandiver, Evans, Monroe, Slagle and Councilman.

Officers and Faculty of Instruction.

R. W. SILVESTER,

President and Professor of Mathematics.

Thomas H. Spence, A. M.	Vice-President and Professor of Languages.
H. B. McDonnell, M. D., B. S.	Professor of Chemistry.
W. T. L. Taliaferro, A. B.	Professor of Agriculture.
James S. Robinson	Professor of Horticulture.
Samuel S. Buckley, M. S., D. V. S.	Professor of Veterinary Science.
Henry Lanahan, A. B.	Professor of Physics and Civil Engineering.
F. B. Bomberger, B. S., A. M.	Professor of English and Civics.
Chas. S. Richardson	Director of Physical Culture and Instructor in Public Speaking.
Maj. J. C. Scantling, U. S. A.	Commandant of Cadets.
J. Hanson Mitchell, M. E.	Professor of Mechanical Engineering.
*	Associate in Horticulture, and in charge of State work.
A. L. Quaintance, M. S.	Professor of Entomology.
J. B. S. Norton, M. S.	Professor of Plant Pathology and Botany.
Henry T. Harrison	Principal of Preparatory Department.
C. G. Church, M. S.	Assistant in Chemistry.
*	Assistant in Mechanical Department.
C. F. Doane, M. S.	Instructor in Dairying.
Frederick H. Blodgett, M. S. R. I. Smith, B. S. T. B. Symons, B. S.	General Assistants in Entomology, Pathology and Botany.
R. W. B. Mayo	Assistant in Department of Languages.
M. N. Straughn, M. S. J. B. Robb, M. S. T. R. Gough, B. S. W. H. Weigand, B. S.	Assistants in Chemistry (State work.)
Jos. R. Owens, M. D.	Registrar and Treasurer.
W. G. Eversfield, M. D.	Physician in Charge.
Miss M. L. Spence	Stenographer and Typewriter.
Mrs. L. K. Fitzhugh	Matron.
E. T. Harrison	Librarian and Executive Clerk.

Arrangement of heads of Departments in order of seniority of service. Assistants in College work in same order, and State work likewise.

*Will be filled.

Calendar for 1902-1903.

First Quarter.

September 16th and 17th	Entrance Examinations.
Thursday, September 18th, 8.45 A. M.	College Work Begins.
Friday, October 10th	Meeting of Board of Trustees.
Friday, December 12th	Meeting of Board of Trustees.
Friday, December 19th, noon	First Quarter Ends.
Friday, December 19th, noon to Monday, January 5th, noon	Christmas Holidays.

Second Quarter.

Monday, January 5th, noon	Second Quarter Begins.
Friday, March 13th	Meeting of Board of Trustees.
Thursday, April 9th, noon	Second Quarter Ends.
Thursday, April 9th, noon, to Tuesday, April 14th, 8.45 A. M.	Easter Holidays.

Third Quarter.

Tuesday, April 14th, 8.45 A. M.	Third Quarter Begins.
June 8th to 12th	Final Examinations.
Friday, June 12th	Meeting of Board of Trustees.
Sunday, June 14th, 4 P. M.	Baccalaureate Sermon.
Monday, June 15th	Class Day.
Tuesday, June 16th	Alumni Day.
Wednesday, June 17th, 11 A. M.	Commencement Day Exercises.

The College Year or Session is divided into two terms: First Term extending from September 18th, to January 31st; Second Term from February 1st, to June 17th.

Examinations are given in all classes: At end of First Quarter, Christmas; at end of Second Quarter, Easter; at end of Third Quarter, Commencement.

Historical Sketch.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6th, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original college building was erected, and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges were doing for the country, passed the "Land-grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became in part, at least, a State institution, and such it is at the present time.

In 1887 the Federal Congress passed a second important Act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees, so far separated it from the College as to put it under a special Director, who is directly responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments, in the form of bulletins, for the information and guidance of those interested in agriculture. Since the inception of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

Once more, in 1892, the Federal Government came to the aid of the agricultural and mechanical colleges. By the Act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of the agricultural and mechanical colleges. The primary object of this legislation was the development of the departments of agricultural and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College, and a somewhat similar institution for the education of colored students, located at Princess Anne, on the Eastern Shore of Maryland.

During the last ten years the history of the College has been that of steady growth. This fact is evidenced by the increased numbers of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the new chemical laboratory, the mechanical engineering building, the Morrill Hall, the new college barn and sanitarium—as well as by the establishment of the Department of Farmers' Institutes and the Departments of State Entomology and State Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

Location and Description.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least ten trains a day, from each city, stop at College Station, thus making the place easily accessible from all parts of the State. The telegraph station is Hyattsville, connected with the college by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north, on the same road. Connection with Washington may be had by steam and electric railway.

The site of the college is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres, and is devoted to the gardens, orchards, vineyard and to general farming.

The main college building is of brick, five stories in height. It contains the students' quarters, mess hall, chapel, lecture rooms and offices. The dormitories are large, well ventilated, and provided with fire escapes and bath and water rooms. All the buildings are lighted with gas and heated with steam from central plants on the college grounds. An addition to the main building has been erected, containing commodious bath rooms on each floor, with the most modern appliances for the comfort and health of the students.

The Mechanical Engineering Department is located in a new two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for carpentry and forging, machinery rooms, a drawing room, library and office. It is a model building of its kind.

The new chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals, which work is assigned to the Professor of Chemistry at this college by an Act of the General Assembly. He is thus the State Chemist.

In 1894 the present building of the gymnasium and library was erected. The gymnasium on the ground floor is well furnished with modern athletic appliances. The library and reading room is on the second floor, and is a large, well-lighted and convenient room for the purpose.

One of the most noteworthy additions to the group of College buildings is the new Morrill Hall. The building provides ample accommodations for the Departments of Agriculture, Horticulture, Biology, Physics, Entomology, Plant Pathology and Veterinary Science, thus relieving the pressure of close quarters, from which these departments have suffered; and greatly extending their opportunities for the development of high-grade scientific work.

A modern sanitarium, well equipped—a long-felt want—has now been completed and furnished, and is ready for occupancy in the fall. Our patrons will no doubt be gratified to learn of this addition. Any form of contagious disease can thus be isolated, and the work of the College be continued without danger to those remaining.

Another important improvement to the working facilities of the College and farm is a new and model barn. Especial attention is invited to the arrangement of this building, which is in many ways an example of an almost perfect general utility farm building.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower-pots, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

Provision for Enlargement and Repair of Buildings.

At the last session of the Legislature, $25,000 was appropriated for making greater accommodations for the increasing demand for matriculation, and $5,000 for an addition to the mechanical building. As early a completion of these additions as good workmanship will permit will give additional accommodation for one hundred students, and commodious auditorium and chapel.

General Aim and Purpose.

The Agricultural College is the State School of Science and Technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture, and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen, and the making of the man of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life, such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to the many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction, looking to the special training of the student in agriculture, mechanical engineering, the natural and physical sciences and belle lettres, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has been prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman year, a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore year, the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third or Junior year, until in his last, or Senior year, his work consists wholly of one or more closely-connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratories and mechanical workshops, a student is able to become so proficient in his chosen line of work that when he leaves the College a career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education to the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown tnat our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

Departments—Equipment and Work.

The following is a brief account of the equipment of the several departments of the College, and the general character of the instruction given in each.

Agricultural Department.

W. T. L. Taliaferro, Professor.

C. F. Doane, Instructor in Dairying.

The Agricultural Department officers four courses—(a) a four years course, leading to the degree of B. S.; (b) a special two-years course; (c) a special creamery course; (d) a ten-weeks winter course.

Outline of Four Years Course.

Course I, First Term, Freshman Year.—Seven periods per week; three theoretical, four practical. The general principles of agriculture, including the composition of soils and plants, the mechanical conditions of soils, elementary drainage, cultivation of the soil, plant reproduction, manures and fertilizers, rotation of crops, food and manure value of crops, farm live stock.

This course aims to give a comprehensive, though elementary, knowledge of the principles and practice of agriculture, and is arranged on the basis of a minimum of theory and a maximum of facts. Gulley's "First Lessons in Agriculture" is used as a text-book, but the greater part of the work is in the fields and stables.

Much of the time is devoted to the study of farm live stock, and the student is familiarized with the different types of farm animals, and the principles of stock judging. Professor Taliaferro.

Course II, Second Term, Freshman Year.—Four periods per week; two theoretical, two practical. This course is devoted to the detailed study of the breeds of farm live stock. Professor Curtiss' "Horse, Cattle, Sheep and Swine" is used as a text book, practical lessons being drawn from the stock on the College Station farm. The "Breeders' Gazette," Hoard's "Dairyman," and other live stock journals and experiment station bulletins are used as collateral reading and for reference.

Professor Taliaferro.

Course III, First Term, Sophomore Year.—Five periods per week; three theoretical, two practical. Crop production, the study of farm crops in detail, as to history, uses and requirements, including local adaptation, varieties, fertilization, cultivation, harvesting. Morrow & Hunt's "Soils and Crops" is the text-book. The College farm furnishes the opportunity for the practical handling of farm crops.

Professor Taliaferro.

Course IV Second Term, Sophomore Year.—Seven periods per week, three theoretical and four practical. The study of the physical and chemical conditions of the soil in their relation to agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too strongly emphasized. The study of this important subject is conducted by means of lectures, text-book, laboratory and field work. The text-book used is Professor King's "The Soil." No State in the Union, perhaps, possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture. Throughout this term, as in the first, frequent and regular field notes are taken of the crops under cultivation, and all cultural and crop experiments at the Experiment Station.

Professor Taliaferro.

Course V, First Term, Junior Year.—Four periods per week—two theoretical, two practical. The principles of stock breeding. The wonderful success which has attended the efforts of well-informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text-book in the course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

Professor Taliaferro.

Course VI, Second Term, Junior Year.—Five periods per week; two theoretical, three practical. (a) Farm machinery; lectures and practical work. (b) Drainage; practical work and text-book, Waring's "Drainage for Profit and Health." Professor Taliaferro.

Course VII, First Term, Senior Year.--Ten periods per week. (a) Fertilizers and Soil Fertility; text books, Vorhees "Fertilizers," Robert's "Fertility of the Land." (b) Stock Feeding; lectures and practical work; reference books, Henry's "Feeds and Feeding," Experiment Station and U. S. Department of Agriculture bulletins.
Professor Taliaferro.

Course VIII, Second Term, Senior Year.—(a) Dairying and Creamery Work; lectures and practical work.—Mr. Doane. (b) Farm Specialties. Professor Taliaferro.

Geology.

Course I, Geology, Both Terms, Freshman Year.—This course is required in the Agricultural and General Science Courses. Attention is chiefly given to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions. Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference. Professor Taliaferro.

Department of Mechanical Engineering.

J. Hanson Mitchell, Professor.

——————Assistant.

This department offers a course to those who desire to prepare themselves to design and construct machinery and superintend engineering establishments. With this end in view is offered an education based on Mechanics, Drawing, Mathematics, Physics and Modern Languages, together with a pratcical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department, and the hours alloted to each, will be found in the "Outline of Courses."

Equipment.—The Mechanical Engineering Laboratory is a two-story brick building, 45 feet by 60 feet, contains the carpenter, forge and foundry, and machine shops, one drafting and two lecture rooms. An annex, 25 feet by 50 feet, contains two 60-horse-power boilers, which furnish steam for power, heat and experimental purposes.

The carpenter shop contains accommodations for twelve students in bench work and wood-turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grinding stone.

In the forge shop are nine power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smith tools for each forge. The moulding and casting is done in the same room as the forge work, and great attention is given this branch, as a knowledge of the foundry work is very essential to the engineer. The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, and with the necessary flasks and tools.

The machine shop contains one Reed 10-inch speed lathe, one 24-inch Gray planer, one 12-inch Reed combined foot and power lathe, a Diamond No. 4 emory tool grinder, one 14-inch Reed engine lathe, a Snyder 24-inch drill press, one 20-inch engine lathe and an assortment of vises, taps, dies, pipe tools and measuring instruments.

An 8-inch by 12-inch engine drives the machinery of the different shops. It was presented to the College by the city of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue print facilities.

Tours of Inspection.—The members of the Senior Class go to Baltimore or Washington for the purpose of inspecting well-known manufacturing plants.

Course I, Mechanical Drawing, Both Terms, Freshman Year.—Eight periods per week. Practice in plain lettering, use of instruments, projections and simple working drawings; the plates upon completion being enclosed in covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

Course II, Technical Instruction, Both Terms, Freshman Year.—Three periods per week first term; two periods the second. Explanation of the reading of mechanical drawings. The proper cutting, angles, care and adjustment of carpenter tools. Relative strength of wood joints. Wood: Its shrinking and warping, and how to correct and prevent. Text, Goss' "Bench-work in Wood." Drill in problems in Arithmetic, Algebra and Drawing, by notes and lectures.

Course III, Shop Work, Both Terms, Freshman Year.—Six periods per week. Use and care of carpenter tools; exercises in sawing, mortising, tenoning and laying out work from drawings; wood-turning and pattern-making.

Course IV, Mechanical Drawing, Both Terms, Sophomore Year.—Four periods per week first term; six the second. Free-hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading. Text-book, Rouillion's "Mechanical Drawing." Professor Mitchell.

Course V, Elementary Applied Mechanics, First Term, Sophomore Year.—Three periods per week. Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting, and bending movements of beams. Jamieson's "Applied Mechanics" is the text used. Professor Mitchell.

Course VII, Shop Work, Both Terms, Sophomore Year.—Four periods per week first term, six the second. Blacksmithing.—The elementary operations of drawing out, upsetting, bending and welding of iron, and making and tempering of steel tools; moulding and casting in iron, and the management of the cupola.

Course VII, Elementary Machine Design, Both Terms, Junior Year.—Four periods per week. The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Wells' "Engineering, Drawing and Design" is the text used.

Course VIII, Shop Work, Both Terms, Junior Year.—Six periods per week. Elementary principles of vise and machine work, which includes turning, planing, drilling, screw-cutting and filing. This is preceded by a study of the different machines used in the machine shops. Professor Mitchell.

Course IX, Descriptive Geometry, Second Term, Junior Year.—Three periods per week. Its relation to mechanical drawing, and solution of problems relating to magnitudes in space, bearing directly upon those principally used by the mechanical engineer. Text-book, Faunce's "Descriptive Geometry." Professor Mitchell.

Course X, Steam Engine and Boilers, Second Term, Junior Year.—Three periods per week. The principles of steam and the steam engine. The slide valve and valve diagrams; the indicator and its diagram; steam boilers—the various types and their advantages, including the method of construction. Text used is Jamieson's "Steam and Steam Engines."

Course XI, Machine Design, Both Terms, Senior Year.—Four periods per week first term, six the second. The calculation and design of pipes, belt and tooth-gearing, beams and cranes. Text, Low & Bevis' "Machine-Drawing and Design." Professor Mitchell.

Course XII, Shop Work, Both Terms, Senior Year.—Eight periods per week first term, ten periods second term. Advanced machine work; the laying out, assembling and construction of some piece of machinery, such as an engine lathe or dynamo.

Professor Mitchell.

Course XIII, Testing, Second Term, Senior Year.—Four periods per week. A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam gauges, slide valve setting and indicator practice. The slide rule, and determining the amount of moisture in steam.

Professor Mitchell.

Department of Mathematics.

R. W. Silvester, Professor.

Henry T. Harrison, Assistant.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our college course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

Course I, Higher Arithmetic, First Term, Freshman Year.—Three periods per week. General review of principles of arithmetic, as applied to stating equations, mensuration, etc. Text-book, Robinson's Test Problems. Professor Harrison.

Course II, Algebra, First Term, Freshman Year.—Five periods per week. Text-book, Wentworth's College Algebra, as far as logarithms.
Professor Harrison.

Course III, Algebra, Second Term, Freshman Year.—Four periods per week. Text-book, Wentworth's College Algebra, completed.
Professor Harrison.

Course IV, Geometry, Second Term, Freshman Year.—Four periods per week. Text-book, Wentworth's Plane Geometry, completed
Professor Harrison.

Course V, Geometry, First Term, Sophomore Year.—Four periods per week. Text-book, Wentworth's Solid Geometry, completed.
President Silvester.

Course VI, Trigonometry, Second Term, Sophomore Year.—Four periods per week. Text-book, Wentworth's Plane Trigonometry, completed.
President Silvester.

Course VII, Analytical Geometry, First Term, Junior Year.—Five periods per week. Text-book, Wentworth's Analytics.
President Silvester.

Course VIII, Differential Calculus, Second Term, Junior Year.—Four periods per week. Text-book, Osborne's, completed.
Professor Lanahan.

Course IX, Integral Calculus, First Term, Senior Year.—Four periods per week. Text-book, Osborne's, completed.
Professor Lanahan.

Department of English and Civics.

F. B. Bomberger, Professor.

Charles S. Richardson, Assistant.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English of necessity lies at the base of all other courses of instruction. A clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature (English and American), theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and thesis writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

English Courses.

Course I, Both Terms, Freshman Year.—All students. Five periods per week. English language, review of grammar, practical exercise in analysis and synthesis, composition and letter-writing. Texts used in Course I, Lockwood's "Lessons in English" and Buehler's "Exercises in English." Professor Richardson.

Course II, First Term, Sophomore Year.—All students. Four periods per week. Principles and practice of rhetoric. Text used in Course II, Genung's "Practical Rhetoric" and "Outlines of Rhetoric." Professor Bomberger.

Course III, Second Term, Sophomore Year.—Classical, Scientific and Mechanical students. Three periods per week. Principles and practice of logic. Text used in Course III, Jevon's-Hill's "Logic." Professor Bomberger.

Course IV, English Literature, First Term, Junior Year.—Classical students only. Five periods per week. Text-book, lectures, readings, composition. Texts used in Course IV, Pancoast's "English Literature," Arnold's "English Literature" and Taine's "English Literature." Professor Bomberger.

Course V, Both Terms, Junior Year. All students. One period per week. Practice in English Composition. Special lectures. Professor Bomberger.

Course VI, American Literature, Second Term, Junior Year.—Classical students only. Five periods per week. Text-book, lectures, readings, composition. Text used in Course VI, Bronson's "American Literature." Professor Bomberger.

Course VII, Both Terms, Senior Year.—Classical students only. Four periods per week. Critical study of English classics, following the outline for college entrance requirements in English.
Professor Bomberger.

Course VIII, Both Terms, Senior Year.—Classical students only. Three periods per week. Principles of Psychology. Text-book and lectures. Text used in Course VIII, Dewey's "Psychology."
Professor Bomberger.

History and Civics Courses.

Course I, Both Terms, Freshman Year.—Classical students only. Four periods per week. Outlines of Ancient History. Text-book and lectures. Text used in Course I, Myer's "Ancient History."
Professor Richardson.

Course II, Both Terms, Sophomore Year.—Classical and Scientific students in first term; classical students only in second term. Three periods per week. Outlines of Mediaeval and Modern History; text-book and lectures. Text-book used in Course II, Myer's "Mediaeval and Modern History." Professor Bomberger.

Course III, Both Terms, Junior Year.—Classical, Scientific and Mechanical students. Two periods per week. Civil Government in the United States. Text-books used in Course III, Fiske's "Civil Government," Hinsdale's "American Government" and Clark's "Outlines of Civics." Professor Bomberger.

Course IV, Both Terms, Junior Year.—Classical students only. Two periods per week. United States Government, Special lectures on Constitution of Maryland. Text-books used in Course IV, Townsend's "Analysis of the Constitution" and Bryce's "American Commonwealth." Professor Bomberger.

Course V, Both Terms, Senior Year.—Classical and Mechanical students. Three periods per week. Principles of Political Economy. Text used in Course V, Well's Political Economy."
Professor Bomberger.

Course VI, First Term, Senior Year.—Classical students only. One period per week. Lectures on "Business Law" as used in every-

day life. Text-book used in Course VI, Parson's "Commercial Law."
Professor Bomberger.

Course VII, Second Term, Senior Year.—Classical and Mechanical students. Three periods per week. The Industrial Development of the United States; Economic Science and current problems. Special lectures.
Professor Bomberger.

Course VIII, Second Term, Senior Year.—Classical students only. One period per week. Lectures on Constitutional and International Law, as applied to current political life.
Professor Bomberger.

Department of Chemistry.

H. B. McDonnell, Professor.

The Chemical Department occupies the new chemical laboratory building, a substantial and commodious brick structure, which is located about one hundred yards north of the main building. It contains, on the first floor, a lecture room, preparation room, office, and two laboratories, with communicating balance room, which are used for State work. On the second floor are the students' laboratories, one for each class, a supply room and students' balance room. The department has a reference library of standard works, which is being gradually increased. The equipment of the laboratory is unusually full and complete.

Instruction in chemistry is both theoretical and practical. Each student is assigned to a laboratory desk, which is provided with gas and water connections, and an outfit of chemicals and apparatus, for which he is held responsible, being charged for apparatus broken. This charge has averaged less than one dollar per year for Sophomores, and less than two dollars per year for Juniors and Seniors.

Students making a specialty of chemistry are allowed to use the laboratories at any time between the hours of 8 A. M. and 5 P. M., and are encouraged to devote more time to practical work than is called for by the schedule. Such students have, invariably, been able to secure positions after graduation.

The outline of the course, with names of text-books used and the number of periods per week, is as follows:

Course I, Both Terms, Sophomore Year.—"Introduction to the Study of Chemistry," Remsen's; recitative four, practical four, first term; recitative four, practical three, second term.
Dr. McDonnell.

Course II, First Term, Junior Year.—"Qualitative Analysis," Mason's; recitative two, practical six; "Determinative Mineralogy," Brush's; recitative two, practical four. Dr. McDonnell.

Course III, Second Term, Junior Year.—"Advanced Chemistry," Remsen's; recitative four; "Quantitative Analysis" and "Assaying," practical, fifteen. Dr. McDonnell.

Course IV, First Term, Senior Year.—"Organic Chemistry," Remsen's; recitative, four; determination of molecular and atomic weights, organic analysis, analysis of fodder, feed stuffs, water, sugar, organic experiments, assaying, etc.; practical ten to sixteen.
Dr. McDonnell.

Course V, Second Term, Senior Year.—The work of this session will be arranged to suit the requirements of the individual student, and will consist mainly in the preparation of a thesis, involving some original research; recitative, four; practical ten to sixteen.
Dr. McDonnell.

Post-Graduate Courses.—Advanced courses in general and technical chemistry and quantitative analysis are arranged to meet the wants of individual cases. For graduates who have completed the five courses, as above, or their equivalent, courses are arranged leading to the degree of M. S. It is possible, by diligent application, to complete such a course in one year's work. A thesis is required.

Department of Physics.

Henry Lanahan, Professor.

The physical lecture-room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture-room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

Course I, Elementary Physics, First Term, Sophomore Year.—Three periods per week. The course consists of lectures, recitations and experimental demonstrations by the instructor, on the mechanics of solids, liquids and gases. The student is required to work a number of problems and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "Elements of Physics." Professor Lanahan.

Course II, Physics, Both Terms, Junior Year.—Four periods per week class-room work, and four periods per week laboratory work. The course begins with a review of mechanics, after which heat, sound, electricity and magnetism and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurement. Written reports of the work done in the laboratory are required weekly. The text-books used are "Theory of Physics," Ames, and "Manual Experiments in Physics," Ames and Bliss. Professor Lanahan.

Course III, Both Terms, Senior Year.—More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

Professor Lanahan.

Department of Civil Engineering.

Henry Lanahan, Professor.

Course I, Surveying, Both Terms, Junior Year.—Two periods per week class-room work; three periods per week field practice. The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; the dividing of land; the theory of the stadia; true meridian lines; leveling; topographical surveying; railroad curves and cross sectioning. Texts, Davies' "Surveying" and Pence & Ketchum's "Field Manual." If time permits, the methods of locating and staking out new roads will be taken up, and some attention given to road construction. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level.

Professor Lanahan.

Course II, Graphic Statics, First Term, Senior Year.—Three periods per week. Including the theory and practice of the graphical methods of determining stresses in framed structures, particularly roof trusses; and bending movements and shears in beam. The course is based on Hoskins' Graphic Statics, and many of the problems are solved analytically as well as graphically.

Professor Lanahan.

Course III, Strength of Materials, Second Term, Senior Year.—Three periods per week. Treating of the elasticity and resistance of

materials of construction, and the mechanics of beams, columns and shafts. The text used is Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.
Professor Lanahan.

Course IV, Both Terms, Senior Year.—A course in railroad and highway location and construction is also offered. Texts, Searles' "Field Engineering," Spalding's "Roads and Pavements," and the reports of the highway division of the Maryland Geological Survey.
Professor Lanahan.

Department of Horticulture.

James S. Robinson, Professor.

*E. P. Sandsten, Associate Professor.

Course I, Second Term, Sophomore Year.—Five periods per week. Lectures and practical work. (1) Methods of plant propagation. (2) Character of soil as best adapted to the different fruits and vegetables. (3) Methods of management of soils and soil improvements. (4) Manure, composts and commercial fertilizers. (5) Hotbeds and cold-frames. The practical work is intended to give students a knowledge of the operations in the garden and orchard. These exercises will be supplemented by familiar talks on the operations performed.

Course II, Small Fruit Culture, First Term, Junior Year.—One period per week. Lectures and discussion on planting, cultivation and marketing of small fruits.

Course III, Floriculture, First Half, Second Term, Junior Year.—Two periods per week. Lectures and practical work. Management and care of greenhouses; plant propagation; heating and ventilation.

Course IV, Olericulture or Vegetable Gardening, Second Half, Second Term, Junior Year.—Two periods per week. Lectures; a discussion of the principles of vegetable gardening, packing and marketing.

Course V, Pomology, First Half, First Term, Senior Year.—Two periods per week. Text-book and lectures. A discussion of the principles underlying the growing of orchard fruits. Selection of location for the orchard, orchard management, handling and marketing of the fruit.

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*Prof. Sandsten resigned August 1st, to accept the position of Horticulturist in the University of Wisconsin.

Course VI, Forestry, Second Half, First Term, Senior Year.—Two periods per week. Lectures. Discussion of the general principles of forestry. The effect of forest upon soil and climate. A brief study of forest trees and silvicultural methods.

Course VII, Plant Breeding and Plant Evolution, First Half, Second Term, Senior Year.—Two periods per week. Lectures. The principles of plant breeding, plant variation, the effect of soil, climate, cultivation and other ameliorating influences upon plants. The crossing and hybridizing of plants. Heredity, selection and origin of domestic varieties. A brief history of plant evolution.

Course VII, Landscape Gardening, Second Half, Second Term, Senior Year.—Lectures and demonstrations. Special attention is given to rural ornamentation, together with a brief study of ornamental trees and shrubs.

Course IX, Special Research Work, Both Terms, Senior Year.—Time and work to be arranged with each student individually. The course will be given only to Seniors. It may be taken by Seniors as their major subject, or as one of their minors.

Department of Veterinary Science.

Samuel S. Buckley, Professor.

Courses I and II, Microscopy and Bacteriology, Second Term, Sophomore Year, and First Term, Junior Year.—For students in agriculture and general science courses. One lecture and four laboratory periods per week. Microscopy for the first six weeks. The use and care of the microscope and microscopical technique. The remainder of the term is devoted to a study of the elements of bacteriology, and includes the preparation of culture media, sterilization, isolation and cultivation of bacteria, staining, mounting, etc. Bacteriology continues throughout the first quarter, Junior year, ending with the December recess. Two lectures and four laboratory periods per week.

Dr. Buckley.

Course III, Second Term, Junior Year.—For students in agriculture and general science. Two lectures and four laboratory periods per week. Comparative anatomy and physiology with special reference to the processes of nutrition. Dr. Buckley.

Course IV, Elements of Veterinary Science, First Term, Senior Year.—Two lectures and four practical exercises per week. Nursing, emergency treatment, administration of medicines, means of restraint, common disorders and diseases, and the general care and management of the domesticated animals. Animal foods and feeding.

Dr. Buckley.

Short Courses.—Students in the Short Winter Course in Agriculture are required to attend the twenty lectures given on veterinary subjects and to examine patients in the stables. Students of the two-year agricultural course receive during the first year, two lectures and six practical periods per week for the second term. During the second year they receive two lectures and six practical periods per week for the first term, and four lectures and two practical periods per week in the second term. The character of the work is such as to enable a stock owner to care for animals in health and disease in an intelligent manner, to appreciate symptoms of disease, and to treat the commoner disorders and diseases of the domesticated animals.

Department of Entomology and Zoology.

A. L. Quaintance, Professor.

R. I. Smith, T. B. Symons, Assistants.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed, with a view of giving the students as broad a knowledge of the subject as practicable in the time devoted to it. In the laboratory, attention is given to methods of investigation, insect anatomy, and preparation and classification of collections made in the field. The work of this department is open only to Juniors and Seniors in the Agricultural, Chemical and General Science Courses, unless by special arrangement.

Course I, Zoology, First Term, Junior Year.—Eight periods per week; lectures and laboratory exercises. This course involves a study of representatives of the principal groups of animals, together with lectures on their structure and classification.

Professor Quaintance and Mr. Symons.

Course II, Entomology, Second Term, Junior Year.—General Course; five periods per week. Lectures and laboratory exercises. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders, and the more important families; the habits and life history of insects, with special reference to those species that are of economic importance. The laboratory and field work includes the study of the more general features of insect anatomy, the determination of general species, and the collection and preservation of insects. Professor Quaintance and Mr. Symons.

Course III, Entomology, Both Terms, Senior Year.—Advanced course. Open only to students who have completed Courses I and II or their equivalents. This course consists of special work in morphology or classification, or working out the life history of insects. Students making entomology their major, will be required to devote at least ten hours per week, throughout the year, to this course, and prepare an original thesis upon the subject chosen or assigned.
Professor Quaintance and Mr. Smith.

Department of Botany and Plant Pathology.

J. B. S. Norton, Professor.
Frederick H. Blodgett, Assistant.

The courses in botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, generalization and other qualities essential to true scientific methods in any work; and to furnish a basis for more technical studies directly connected with agriculture, for since plants in the field and garden are the subjects dealt with, the study of plant life must be one of the fundamental sciences on which such work is based. No course can be taken unless those preceding it have been pursued. The equipment, means of illustration and demonstration consists of a reference library, containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants, microtome and other tools, reagents and apparatus for histological work and physiological experiments, a culture room, sterilizers, incubators, and other facilities for the study of plant diseases.

Course I, Elementary Botany, Second Term, Freshman Year.—Four periods per week. Laboratory and field work with supplementary reading, using Leavitt's "Outlines of Botany," and Bergen's "Foundations of Botany" as guides, and taking up the fundamental facts regarding structure and elementary physiology of the common plants with a systematic study of the spring flora. Each student begins a collection of plant specimens to illustrate a subject in which he is specially interested. Professor Norton.

Course II, Elementary Botany, continued, First Term, Sophomore Year.—Four periods per week. The field work of Course I is continued with the fall plants and special attention given to the associations of plants and their relations to environment. Mr. Blodgett.

Course III, Morphology and Life Histories of Plants, First and Second Quarters, Junior Year.—A comparative study of the structure and life histories of the principal types of plants from the lowest to the highest is pursued with special attention to those groups of plants of economic interest, fungi, grasses, timber, for example. A minimum of four periods of microscopic work in the laboratory and two lectures per week. Mr. Blodgett.

Course IV, Economic Botany, Third Quarter, Junior Year.—Structure, geographical distribution, classification and uses of economic plants, including food plants, grasses, timber, fruits, weeds, poisonous plants, parasitic fungi, etc. Two lectures per week, and a minimum of four periods of laboratory work per week.

Professor Norton.

Course V, Plant Physiology, First Term, Senior Year.—Two lectures and a minimum of six periods of experimental laboratory work. This course may be elected as a minor.

Professor Norton and Mr. Blodgett.

Course VI, Plant Pathology, Second Term, Senior Year.—This course embraces a study of the causes, symptoms, means of control of plant diseases. It must be elected as a minor following Course V, or the two courses may be pursued together. Two lectures and a minimum of six periods of laboratory and field work per week.

Professor Norton.

Senior students electing botany as a major study must have had courses one to four inclusive, or their equivalents, and must prepare a thesis along the line of the major work. An outline of the work and hours will be arranged upon consultation with the professor in charge.

Advanced Work.—Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalents. This work is designed for students who wish to specialize in Botany or in Plant Pathology. An outline of the courses and subjects for original investigation will be arranged upon consultation with the professor in charge.

Books of Reference.—The following are some of the books used by students in the different courses:

Course I and II: Leavitt's "Outlines of Botany; Bergen's "Foundations of Botany," Gray's "Lessons and Manual," Britton & Brown's "Illustrated Flora of the Northern States and Canada," Kerner and

Oliver's "Natural History of Plants." Coulter's "Plant Relations." Courses III and IV: Strasberger's "Text-book of Botany," Campbell's "University Text-book," Goebel's "Outlines of Classification and Special Morphology," Bennett and Murray's "Cryptogamic Botany," Underwood's "Moulds, Mildews and Mushrooms," Engler and Prantl's "Pflazenfamilien," De Candolle's "Origin of Cultivated Plants." Course V: Sach's "Physiology of Plants," Pfeffer's "Pflanzenphysiologie," Ganong's "Plant Physiology," Sorauer's "Physiology of Plants," MacDougal's "Plant Physiology." Course VI: Tubeuf and Smith's "Diseases of Plants," Ward's "Disease in Plants," Massee's "Text-book of Plant Diseases," and many others of minor importance.

Department of Languages.

Thomas H. Spence, Professor.
R. W. B. Mayo, Assistant.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German and French; only students of the Classical Course are required to take Latin. Students in the General Science Course may elect to take Latin throughout the Freshman year in place of agriculture.

The course of study in Latin is given with two ends in view—first, to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of selections from Sallust, Vergil, Cicero, Horace, Caesar, Ovid, Livy, Juvenal, Tacitus and Terence.

On account of the large percentage of Germans in our population, a speaking knowledge of this language is very important, and especial attention is given to conversation throughout the course. After the elements of the language have been mastered, and a certain facility of translation acquired, the class is divided, and the students pursuing the Classical Course continue to translate from the works of classic German authors, while the students of the Scientific Courses are given scientific German for translation.

In French, also, after the elementary work and grammar have been completed, the students of the Classical Course, and those of the other courses are separated the former translating selections from French literature, while to the latter are assigned books and periodicals of a scientific nature for translation.

Latin Courses.

Course I, Grammar and Composition, Both Terms, Freshman Year.—Six periods per week. Text-books, Collar and Daniell's "First-Year Latin," Gildersleeve's "New Latin Primer," Rolph's "Viri Romae."

Course II, Translation and Composition, First Term, Sophomore Year.—Six periods per week. Text-books, Harper and Tolman's Caesar, Chase and Stuart's Sallust.

Course III, Translation, Composition, Mythology, Prosody, Second Term, Sophomore Year.—Six periods per week. Text-books, Harper & Miller's Virgil, Gayley's "Classic Myths," Daniell's "Latin Prose Composition," Allen and Greenough Latin Grammar.

Course IV, Translation and Composition, First Term, Junior Year.—Six periods per week. Text-books, Allen and Greenough's Cicero, Daniell's Latin Prose Composition.

Course V, Translation and Prosody, Second Term, Junior Year. —Six periods per week. Text-book, MacLeane's Horace.

Course VI, Translation, Composition and Mythology, First Term, Senior Year.—Six periods per week. Text-books, Chase and Stuart's Livy, Allen and Greenough's Ovid.

Course VII, Translation, Second Term, Senior Year.—Six periods per week. Text-books, Chase and Stuart's Tacitus, West's Terence, MacLeane's Juvenal.

German Courses.

Course I, Grammar and Conversation, Second Term, Sophomore Year.—Four periods per week. Text-book, Otis' "Elementary German."

Course II, Translation, Both Terms, Junior Year.—Three periods per week. Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hoeher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrop's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Course III, Scientific German, Both Terms, Senior Year.—Three periods per week. Selected readings from various periodicals.

French Courses.

Course I, Grammar and Composition, First Term, Senior Year.—Five periods per week. Text-book, Whitney's French Grammar.

Course II, Translation, Second Term, Senior Year.—Five periods per week. Text-books, Super's French Reader, Rougemont's La France, Fenelon's Telemaque, Herdler's Scientific French Reader, Dumas' Les Trois Mousquetaires, and others; also French periodicals.

Preparatory Department.

Henry T. Harrison, Principal.

Charles S. Richardson, Assistant.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

Course I, Arithmetic, First Term.—Ten periods per week, Wentworth's Grammar School Arithmetic, completed.
Professor Harrison.

Course II, Arithmetic, Second Term.—Five periods per week. Advanced work. Professor Harrison.

Course III, Algebra, Both Terms.—Five periods per week. Wentworth's Algebra, as far as quadratics. Professor Harrison.

Course IV, History, First Term.—Five periods per week. United States History from 1775 to the present time.
Professor Harrison.

Course V, History, Second Term.—Five periods per week. Colonial history, and a review of whole of Barnes' Brief History of the United States. Professor Harrison.

Course VI, Geography, First Term.—Five periods per week. Descriptive Geography, completed. Professor Harrison.

Course VII, Geography, Second Term.—Five periods per week. Maury's Physical Geography, completed. Professor Harrison.

Course VIII, English, Both Terms.—Eight periods per week. Spelling, technical grammar, parsing and analysis, composition, letter-writing and elocution. Professor Richardson.

Military Department.

J. C. Scantling, Major, U. S. A.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier;" "School of the Company," "School of the Battalion" (in close and extended order), the "School of Cannoneer" and out-post duty. The study of tactics and lectures on military science and tactics, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution in the true sense of the word. It teaches a system of organization that governs mankind.

Discipline.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be truthful under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the key-note of student government. Failure in duty means, necessarily, forfeiture of confidence and trust.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offences the punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examination, is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that a failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. **"Hazing" is invariably punished by instant dismissal.**

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Three reports are sent to each parent during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

Promotions.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldiery bearing, observance of the rules of the College and scholastic attainments. These are valued in the order named, forty per cent., thirty per cent., thirty per cent. Perfect would be one hundred. Below seventy per cent. deficient, and hence not considered for promotion. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldiery bearing and conduct, and from the recorded written reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior class; sergeants from the Junior class, and corporals from the Sophomore class. No exception will be made to this order, unless it be that the number of men in any one class, is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

Uniform.

The cadet uniform, of substantial cadet-grey cloth, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. The cost of the entire outfit—coat, trousers and cap—is $16.00 Parties coming through Baltimore can leave measures and orders with the New York Clothing House, 102-104 E. Baltimore Street. *Payment must be made for this at time of entrance. This is imperative: The firm requires it.*

Daily Trumpet Calls.

First Call for Reveille	6.30 A. M.
Reveille	6.35 A. M.
Assembly, Roll Call	6.40 A. M.
Breakfast	6.55 A. M.
Assembly, Roll Call	7.00 A. M.
Chapel	7.25 A. M.
Sick Call	7.40 A. M.
Recitation	7.55 A. M.
Drill	11.10 A. M.
Assembly, Roll Call	11.15 A. M.
Recall	11.45 A. M.
Guard Mounting	11.50 A. M.
Assembly, Roll Call	11.55 A. M.
Adjutant's Call	12.00 M.
Dinner	12.15 P. M.
Assembly, Roll Call	12.20 P. M.
Recitations	12.55 P. M.
Supper	5.55 P. M.
Assembly, Roll Call	6.00 P. M.
Retreat	7.20 P. M.
Assembly, Roll Call	7.30 P. M.
Tattoo	10.00 P. M.
Tapps .... Lights Out	11.00 P. M.

Department of Public Speaking.

Charles S. Richardson, Professor.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

First and Second Terms, Sophomore and Freshman Years, one period per week; Preparatory Department, four periods per week.

Department of Physical Culture.

Charles S. Richardson, Director.

The physical culture of the students is provided for by a regular course of instruction in the gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years. Three periods per week, Preparatory, Freshman and Sophomore years.

One of the most valuable features of this department is a complete anthropometry outfit by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

The College Library.

E. T. Harrison, Librarian.

The College library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well-arranged and lighted, and is in all respects comfortable and convenient.

While the library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry, and the standard works of fiction. Several hundred volumes of bound government reports form an important addition to the reference works of the library. Many of the leading magazines and a large number of newspapers are subscribed for.

Courses of Study.

In order to systematize the work of the numerous departments of the College, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, four distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering, Scientific and Classical. In three of these, the Agricultural, Mechanical Engineering and Classical, a continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the classwork is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular study desired—agricultural, mechanical or the classical branches, is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientific agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical, general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for those who have neither time nor the opportunity to take the regular four years course. In fact, it is really designed for those actually engaged in farming, and who can spare a few weeks during the winter to attend lectures, and to follow the practical work of the College and Station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry and chemistry, horticulture, entomology, plant physiology and pathology, farm accounts, road construction, carpentry, blacksmithing, pipe fitting, veterinary science, the principles of citizenship and the elements of business law. The entire expense, including board, need not be over fifty dollars ($50.00). The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of the Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering. The course leads to the degree of Mechanical Engineer.

The Classical Course was instituted to meet a demand on the part of the patrons of the College for a course of study which should prepare young men to enter the so-called learned professions. The course emphasizes the modern languages, Latin, mythology, English, civics and psychology, with a moderate amount of mathematics and the natural and physical sciences. The degree of Bachelor of Arts is conferred upon its graduates. The degree of Master of Arts will be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

Requirements for Advanced Degrees.

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Caesar, Nepos, Sallust, Vergil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science—chemistry, biology, botany, pathology, entomology, veterinary science, physics, civil engineering or political science. The basis of the course is a thorough training in mathematics, English, and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Junior year. In the Senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups of studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon college graduates of not less than two years' standing, who have resided at this College for two years, and have completed the equivalent of the above course of study.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

Outline of Courses.

The following tables will serve to illustrate in a succinct manner the subjects offered in each item of every session, with the number of periods allotted to each. The subjects for the Senior year are not tabulated for the Agricultural and General Science Courses, as they are mostly elective. Numerals in parenthesis indicate practical work. Two periods of practical work is regarded as equivalent to one period of recitative work, the College day being divided into eight periods of recitative or class work of forty-five minutes each.

Freshman Year.

First Term.	Agricultural.	General Science.	Mechanical.	Classical.
Agriculture	3 (4)	3 (4)		
Drawing	(4)	(4)	(8)	(4)
English	5	5	5	5
Geology	3	3		
History				4
Latin				5 (1)
Mathematics	8	8	8	8
Physical Culture	(3)	(3)	(3)	(3)
Public Speaking	1	1	1	1
Technical Instruction			3	
Wood Work	(4)		(6)	
Second Term.				
Agriculture	2 (2)	2 (2)		
Botany	2 (2)	2 (2)		
Drawing		(4)	(8)	
English	5	5	5	5
Geology	3	3		
History				4
Latin				5 (1)
Mathematics	8	8	8	8
Physical Culture	(3)	(3)	(3)	(3)
Public Speaking	1	1	1	1
Technical Instruction			2	
Wood Work			(6)	

NOTE.—Students pursuing General Science course may elect Latin in place of Agriculture.

Sophomore Year.

First Term.	Agricultural.	General Science.	Mechanical.	Classical.
Agriculture	3 (2)			
Blacksmithing	(4)		(4)	
Botany	(4)	(4)		
Chemistry	4 (4)	4 (4)	4 (4)	4 (4)
Drawing			(4)	
History		3		3
Latin				5 (1)
Mathematics	4	4	4	4
Physics	3	3	3	3
Public Speaking		1	1	1
Rhetoric	4	4	4	4
Theoretical Mechanics			3	
Second Term.				
Agriculture	3 (4)			
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Drawing			(6)	
German	4	4	4	4
History				3
Horticulture	2 (3)	2 (3)		
Latin				5 (1)
Logic		3	3	3
Mathematics	4	4	4	4
Microscopy and Bacteriology	1 (4)	1 (4)		
Mouldings and Castings			(6)	
Public Speaking	1	1	1	1

Junior Year.

First Term.	Agricultural.	General Science.			Mechanical.	Classical.
		Biological.	Chemical.	Physical.		
Agriculture	2 (2)					
Analytical Geometry				5	5	
Botany	2 (4)	2 (4)				
Chemistry and Mineralogy			4 (10)	4 *(4)		
Civics		2	2	2	2	4
Microscopy and Bacteriology	2 (2)	2 (2)				
Drawing				*(4)	(4)	(4)
English	1	1	1	1	1	5 (1)
German	3	3	3	3	3	3
Horticulture	3					
Latin						6
Machine Work					(6)	
Physics		4 (4)	4 (4)	4 (4)	4 (4)	
Surveying	2 (3)			*2 (3)		2 (3)
Zoology	2 (6)	2 (6)	2 (6)			
Second Term.						
Agriculture	2 (3)					
Botany	2 (4)	2 (6)				
Chemistry and Mineralogy			4 (15)	*4 (4)		
Civics		2	2	2	2	4
Descriptive Geometry					3	
Dif. Calculus				4	4	
Drawing				*(4)	(4)	
English	1	1	1	1	1	5 (1)
Entomology	1 (4)	1 (4)				
German	3	3	3	3		5
Horticulture	3					
Latin						6
Machine Work					(6)	
Physics		4 (4)	4 (4)	4 (4)	4 (4)	
Surveying	2 (3)			*2 (3)		2 (3)
Theory of Steam Engine					3	
Comparative Anatomy & Physiology	2 (4)	2 (4)				

*NOTE.—Students in Physical Course may elect Chemistry 4 (4) throughout the year, or Drawing (4) and surveying 2 (3) throughout the year. Students in Agriculture may elect Chemistry 4 (4) in lieu of Botany throughout the year, upon consultation with the Heads of the Departments concerned.

Senior Year.

The work for the Senior year in Agriculture* and General Science shall consist of a major subject, and two or more minor subjects. This work will be elective upon consultation with the Professor in charge of the major subject.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) hours recitative work, at least ten (10) hours of which shall be devoted to the major subject, and ten (10) to the minor subject.

First Term.	Mechanical.	Classical.	Second Term.	Mechanical.	Classical.
Business Law		1	International Law		1
Integral Calculus	4		Economics	3	3
Economics	3	3	English		4
French		5	French		5
English		4	German	3	
German	3		Latin		6
Graphic Statics	3		Machine Design	2 (4)	
Latin		6	Machine Work	(10)	
Machine Design	2 (2)		Psychology		3
Machine Work	(8)		Strength of Materials	3	
Psychology		3	Testing	(4)	
French		5	French		5

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*Veterinary Science is a required subject in the Senior Year for students of the Agricultural course.

Two Years Course in Agriculture.

First Year.

First Term.		Second Term.	
Agriculture	6 (8)	Agriculture	5 (6)
Blacksmithing	(4)	Chemistry	4 (4)
Chemistry	4 (4)	Horticulture	2
Dairying	1 (4)	Pipe Fitting	(4)
Horticulture	1	Veterinary Science	2 (6)
Wood Work	(4)		13 (20)
	12 (24)		

Second Year.

First Term.		Second Term.	
Agriculture	4 (6)	Agriculture	4 (6)
Botany	2 (4)	Botany	2 (4)
Horticulture	4 (4)	Entomology	1 (4)
Veterinary Science	2 (6)	Horticulture	2 (4)
	12 (20)	Stock Feeding	4 (2)
			13 (20)

Short Winter Course in Agricultural—Commencing Jan. 6, 1903.

A ten weeks course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four years' course; this solves the problem for them.

Outline of the Course.

The work of the course consists of lectures and practical exercises in the laboratories, shops, greenhouses, barns and creamery. The subjects handled and the allotment of hours are as follows: Farm crops and cultivation of the soil, 10; plant production, 10; farm live

stock, 20; tobacco, 6; stock feeding, 9; agricultural chemistry, 10; manures, 10; farm accounts, 12; dairying, 40; veterinary science, 20; carpentry, blacksmithing and pipe fitting, 50; plant physiology and pathology, 15; economic entomology, 20; horticulture, 30; road construction, 5; principles of citizenship, 10.

No Expense for Tuition, Use of Laboratories or Supplies.

Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within short distance of College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at College for $4.00 per week.

Apprenticeships in Agriculture.

The Agricultural Experiment Station, instead of having all the work in the dairy and horticultural divisions performed by regularly paid laborers, has some performed by apprentices. The apprenticeships in these divisions have been established with five objects in view, viz.: 1st.—In order to offer to young men who have a good common school education, and who have not the means for taking either a regular college course, or even a short course, an opportunity to become trained and skilled laborers in the dairy or some class of horticultural work. 2nd.—In order to enable young farmers to take up and engage in some of the specialties in farming on their own farms in an intelligent manner. 3rd.—In order to supply some of the numerous applications that come to the College and Station for skilled help of the character indicated. 4th.—In order to give the College and Station a nucleus for the extension of their work and a more appreciative constituency. 5th.—In order to have some of our labor performed by persons who have more interest in what they are doing than the money they are to receive.

These apprenticeships are open to farmers' sons on the following terms: The Station will board and room the apprentice or pay the equivalent in money as preferred. The Station will furnish the instruction and facilities for instruction given in the several branches pertaining to the specialty taken up.

Those serving a dairy apprenticeship will be expected to devote from three to five hours of each day in receiving class-room instruction, and in study, besides the time devoted to practice in the skilled operations. It is expected that apprentices shall become thoroughly familiar with the scientific feeding of dairy stock, and with all the modern practices pertaining to dairy and creamery management. The plan pursued is to divide the work which would ordinarily be performed by one laborer among three apprentices.

A dairy apprentice is expected to stay at the Station for six months. The horticultural apprentice is to serve for one year on the same terms as the dairy apprentice. The instruction taken in this division will be given at the same time, and with short course students of the College. The horticultural apprentice will be expected to take part in all classes of the work of this division, but he may specialize, so as to become specially skilled in either large fruits, small fruits, truck crops, floriculture, nursery management, green-house management or spraying. The apprentices shall have access to the libraries and reading-rooms of the Station at all hours.

The Station can accommodate but a limited number of apprentices, and vacancies will be filled in the order in which applications for the same are received.

After an apprentice has served his time, should a position be desired by him, we will take pleasure in recommending him to a place whenever we have a request for skilled help in that particular line, provided that such apprentice has proven himself worthy. So far we have had more applications for skilled help on farms and in creameries than we have been able to supply. Make applications and requests for further information to

H. J. PATTERSON, Director of the
Maryland Agricultural Experiment Station,
College Park, Md.

Summer School.

The Summer School, organized during the summer of 1901, by this College, supplies a long-felt want to the teachers of the State. Heretofore it has been necessary for teachers desiring a special course during the summer vacation, to go to Cornell or Chautauqua Lake, or some other place equally remote. The revival in matters of public education throughout the State has created a demand for a school where teachers may spend a month in the summer, and at a small expense, pursue such branches as Nature Studies, Drawing and Physical Culture, thus equipping themselves more thoroughly for the duties of their profession, and at the same time getting the benefit to be derived from the recreation and social intercourse of a month's sojourn in the country.

The Agricultural College is in every respect suitable for a Summer School. It is situated upon an eminence overlooking a wide extent of country, and is surrounded by magnificent shade trees and a profusion of plants and flowers. The botanical, entomological, horticultural, chemical and physical culture departments are thoroughly equipped, and the State Experiment Station offers a magnificent field to those interested in nature studies.

The College is situated about thirty-two miles from Baltimore, and eight miles from Washington, on the B. & O. R. R., and electric cars are running to and fro between the College and Washington at frequent intervals. The Art Galleries, Museums, Libraries and National buildings of Washington City are in themselves of incalculable benefit to the student. The tennis courts and other playgrounds give ample opportunity for physical recreation.

The regular instructors are the members of the Faculty of the Maryland Agricultural College. Prominent lecturers will be secured from Washington, Johns Hopkins University and other sources, as the occasion demands.

While primarily designed for teachers, the School is open to any one who may desire a course in Botany, Entomology, Horticulture, Agriculture, Anatomy, Chemistry, Drawing, Physical Culture and the common English branches.

The fact that the College trustees have allowed the use of the buildings and equipments free of charge has made it possible to place the cost of board and tuition at such a low figure as brings the Summer School within the reach of all. Indeed, the conditions are such that a teacher may take a month's course at the Maryland Summer School at no greater expense than would be required for board alone at any summer resort. For particulars regarding any matter hereinbefore set forth, address

R. W. SILVESTER, President,
Maryland Agricultural College,
College Park, Md.

General Information.

Requirements for Admission.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 16th and 17th, 1902. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic (complete), algebra (as far as quadratics), political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic (as far as percentage), United States history and political geography.

Every applicant for admission to the College must bring satisfactory testimonials as to character and previous scholarship, from one or more persons qualified so to speak—his former teacher, pastor or neighbor, acquainted with his general reputation. **This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.**

Students from newly-acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the president can deal in any case of emergency.

Applicants having completed the eight grades of the grammar school course upon presentation of a certified copy of the final report showing record of work completed and certificate of satisfactory deportment from the teacher in charge, may be admitted to the Freshman Class without further examination.

Graduates of standard high schools under similar conditions may be admitted to the Sophomore Class. It must be understood that all such assignments are made conditioned upon the applicant's demonstrating his fitness to bear the responsibilities assumed. Promotions and reductions will be made in six weeks after the resumption of the regular exercises, as the individual cases may require.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present certificates from county or city schools covering the work of the lower College classes as hereinbefore stated.

Examination and Promotion.

In order to pass from one class to the next higher class a student is required to pass the yearly examination by a mark of at least sixty per cent. in each study, and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year.

It has been found necessary to make some regulations to provide for cases of using unfair means in examinations. The Faculty, therefore, has agreed upon the following rules, which will be rigidly adhered to:

I.—"Any student detected in so doing will be required to surrender his papers, and will not under any circumstances be given another examination in that particular study."

II.—"Any student detected in so doing will not, under any circumstances, be allowed to receive a commission as a cadet officer."

Scholarships.

The College offers a number of scholarships—three for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County Examiner. All scholarship students must be prepared for entrance to the Freshman class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present them-
"selves at the College, or other designated place, at the date which
"may be named, in the September or January next following the
"award, and be examined by College authorities for entrance to the
"Freshman class. Alternates are to be thus examined, as well as prin-
"cipals, and in case of a failure of the principal to secure or hold the
"scholarship, the alternate will have the first right to the place, if
"within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to se-
"cure the same, pass the entrance examination of the College, and (if
"entering in January) such other examination as may be required to
**"join *the Freshman class*: Every one must declare his intention
"of completing the prescribed course of study of the College, in
"either Agriculture or Mechanical Engineering, provided he retains
"his Scholarship, and must make an advance payment of $15 on
"the year's account. And to hold a scholarship, the student must
"make the subsequent payments and meet such requirements of**

"the College as to scholarship and deportment, as may be prescribed by the President and faculty. By passing special examinations, candidates for scholarships may be permitted to enter the "Sophomore class, or by presenting satisfactory certificates."

Student Expenses.

The expenses of the College year for the several classes of students are as follows. No reductions are made for regular vacations. It will be noted below that no charge is made for tuition or books.

Regular Students.

Board, heat, light and room	$150 00
*Laboratory fee, each laboratory used	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$165 00

Scholarship Students.

Board, heat, light and room	$ 70 00
*Laboratory fee, each laboratory used	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$ 85 00

Day Students.

Room and heat	$ 24 00
*Laboratory fee, each laboratory used	6 00
Breakage fee	5 00
Total cost	$ 35 00

Time of Payment.

For Regular Students:

$40.00 (and the fees) on entrance; $40.00 on November 15th; $40.00 on February 1st; $30.00 on April 1st.

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*For students in chemistry only.

†This covers only such attention as arises from ordinary sickness—cost of consultation and trained nurses extra.

For Scholarship Students:

$35.00 (and the fees) on entrance; $35.00 on February 1st.

For Day Students:

$12.00 (and the fees) on entrance, and $12.00 on February 1st.

Promptness in Payment is Insisted Upon.

Explanation of Fees.

The laboratory fee is intended to cover the cost of the materials and apparatus consumed by the student in practical laboratory work.

The physician's fee is to provide for the attendance of the regular College physician in all ordinary cases of sickness.

The breakage fee is to cover all losses to the College caused by careless breakage or other damage to property by the students. Each loss is divided proportionately among the students, and the unused balance of each fee refunded at the close of the year. In case the loss is known to be caused by any particular student the whole amount is charged to his account.

Except in cases of extended illness, no money will be refunded for long-continued absence or enforced withdrawal from the College.

Students entering late in the session will be charged according to the date of entrance. No allowance will be made for less than one month.

Articles Necessary to be Provided.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed).
3 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three-quarters size).
6 towels.

1 chair (uniform).
1 pillow.
1 mattress (shuck), cotton top (uniform).

The room-mates together purchase the following articles:—

1 set of lamp fixtures (uniform).
1 pitcher and basin (uniform).
2 tablecloths (uniform).
1 broom.
1 looking-glass.
1 slop-jar (porcelain).

All the articles marked uniform in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, **and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.**

Letter from Department of Agriculture.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving a compensation which will enable them to pay all expenses. This offer on the part of the Department of Agriculture is greatly appreciated, and will, no doubt, be availed of by many attending the land-grant colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:

Department of Agriculture, Washington, D. C.,
June 27th, 1899.

"Dear Sir:—In my annual report to the President for 1898, I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post-graduate studies in connection with work in the scientific division of this department, as far as practicable. In pursuance of this policy, I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as "Scientific Aids," on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support, in the preparation of their graduates for posts of usefulness in this department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope, therefore, that the effort which I am now making in this direction will be but a beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high-grade scientific work. It will, of course, be understood that under present conditions the Department can only admit a very limited number of scientific aids. Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualications for aiding in the work of the Department now in progress.

"In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission.

"Very respectfully,
"JAMES WILSON,
"Secretary Agriculture."

To R. W. Silvester, President, College Park, Md.

Scientific Aid, Department of Agriculture.

August 1st, 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of Scientific Aid, Department of Agriculture.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

	Subjects.	Weights.
1.	College Course with Bachelor's Degree	50
2.	Post-graduate Course and Special Qualifications	25
3.	Thesis or Other Literature	25
	Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commissioner prior to the hour of closing business, on August 1st, 1900, their statements and other material which will be required as specified in a special form which will be furnished them by the Commission, together with application blank (Form 304), in order to have their names entered upon the register, which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to August 1st, 1900, may file them at any subsequent time, when they will be rated, and the names of those attaining eligible averages will be entered upon the register.

For the information of applicants the following statement is made, as received from the Secretary of Agriculture:

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.

2. Each applicant must file with the United States Civil Service Commission, Washington, D. C., a properly certified statement as to the length of time spent in college, the studies pursued, the standing in these studies, the special work it is desired to take up, and the special qualifications for such work, and finally, a thesis upon such scientific subjects as the applicant may select, or in lieu of this, any literature on scientific subjects, over his own signature.

3. The length of time any scientific aid may serve in the Department is limited to two (2) years.

4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified, without regard to any consideration, save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blanks (Form 304) and special forms.

The Alumni Association.

The growth of the Alumni Association during the past year is a source of great satisfaction to the officers of the College, and of the Association. Through the efforts of its officers a banquet was held at the College in June, this year. Renewed interest was shown by the existing members of the Association, and the occasion was marked by a large increase in the membership, recruited largely from the older graduates of the College.

All indications point to a great advance in the growth of the organization, and now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. At its regular annual meeting in June, it was decided that the Association would continue its offer of medals for proficiency in three of the departments of College work. By restricting the competition for the medal to be awarded for the best paper on "Agricultural Science" to those students pursuing original research, it is intended and hoped, by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

It will be a source of gratification to the members of the Association to note the action of the Board of Trustees of the College with reference to the holding of scholarships in the College. Two years ago the Association passed a resolution looking to the restriction of the holders of the State scholarships to the Agricultural and Mechanical courses in the College. This was with the idea of carrying out more completely the ideas of the founders of the College, in establishing a school for instruction in Agriculture and the Mechanic Arts. The Board of Trustees last year passed an order putting the restriction in full operation. It is along this and similar lines that the Association has a broad field provided in which to exert its efforts, and as it increases in strength, it may be expected to make its influence felt for the advancement of the interest and welfare of the College. The officers of the Association for the ensuing year are: President, J. Enos Ray, '92; Vice-President, S. S. Buckley, '93; Secretary-Treasurer, N. Morris Straughn, '99; Executive Committee, members-at-large, F. B. Bomberger, '94, and N. H. Gill, '97.

Graduates and members of the Association are requested to keep the Secretary-Treasurer informed of any changes in their addresses. Any information concerning the older graduates, which will enable the officers to locate and communicate with them, will facilitate their efforts, and will tend to further the success of the Association.

Address of the Secretary-Treasurer:—N. Morris Straughn,
College Park, Md.

Donations to Library.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey; Weather Service and Highway Commission, Department of Agriculture, Washington, D. C.; County Press—Valuable additions of their publications; Dr. H. Burton Stevenson, Rural Register for 1859.

Student Organizations and Opportunities.

Student Clubs for religious, social, literary and athletic purposes are encouraged as a means of creating Class and College pride, and developing an *esprit de corps* among the students. Each class has its own organization, in which matters relating to class work are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline, and tends to raise the standard of student honor.

Young Men's Christian Association.

H. K. Bradford, President. E. Powers, Vice-President.
G. W. Cairnes, Secretary. P. L. Peach, Treasurer.

Most encouraging work has been done by this organization during the past year, and much interest has been shown in both the private and public meetings.

Athletic Association.

T. B. Symons, President. J. D. Bowman, Vice-President.
P. L. Peach, Secretary. S. P. Darby, Treasurer.

Literary Societies.

Officers of the "New Mercer" Literary Society.

R. L. Mitchell, President. H. N. Lansdale, Vice-President.
L. E. Mackall, Sec'y. and Treas. C. P. Page, Editor.
J. M. Turner, Sergeant-at-Arms.

Officers of "Morrill" Literary Society.

T. B. Symons, President. S. P. Darby, Vice-President.
A. R. Hirst, Sec'y. and Treas. J. I. Wisner, Editor.
E. P. Walls, Sergeant-at-Arms.

These societies are invaluable adjuncts to College work. Through them a good knowledge of parliamentary law is gained, as well as a readiness of expression and activity in thought—qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law, and train them in the delivery of their orations and debates.

The Oratorical Association of Maryland Colleges.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges, in rotation, and a marked improvement is to be observed as a result of its organization.

Editorial Staff of Reveille, '02.

A. R. Hirst, Editor-in-Chief.
J. D. Bowman, } Associate Editors.
R. L. Mitchell, }

Departmental.

Athletic, L. E. Mackall.
Literary, J. Coudon, Jr.
Humorous, S. P. Darby.
Rossbourg Club, T. B. Symons.

Class and Historical, A. R. Hirst.

Board of Managers.

H. N. Lansdale, Business Manager.
W. S. Fendall, } Associate Business Managers.
J. I. Wisner, }

The "Reveille" is the College annual edited entirely by the Senior class; it is the successor to the "Cadet's Review." Six editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard, both of originality and expression,

Rossbourg Club.

R. L. Mitchell, President.
L. E. Mackall, Vice-President.
J. D. Bowman, Treasurer.

The social man is a necessity—hence, this organization is encouraged and supported by the President and Faculty. The entertainments of the same have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

Student Opportunities.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference. The compensation in all cases is fixed at ten cents per hour.

Medals Awarded, Commencement 1902.

Senior Class, President's Medal........................A. R. Hirst.
Gold Medal, for Highest Standing for Entire Course.

Junior Class, President's Medal..................R. W. B. Mayo.
Gold Medal, for Highest Standing in Junior Year.

Alumni Medals ....R. L. Mitchell.
Gold Medal, for Best Debater in Competitive Debate.

Gold Medal, for Proficiency in Mechanical Engineering ....J. D. Bowman.

Gold Medal, for Best Thesis on a Subject Relating to Scientific Agriculture ....T. B. Symons.

Trustees' Medal ....R. L. Mitchell.
Gold Medal, for Best Essay on "American Citizenship."

Commandant's Prize ....T. B. Symons.
Gold Watch, for Highest Standing in Military Department.

Commandant's Prize ....A. T. Schenck.
Gold Scarf Pin, for Neatest Set of Equipments.

Graduates of 1902 and Degrees Conferred.

Subjects of Theses.

John Darby Bowman, M. E..................Montgomery Co., Md.
"Efficiency Tests of a Single Slide-Valve Engine."
Joseph Coudon, Jr., B. S...........................Cecil Co., Md.
"Notes on Stock Breeding."

Samuel Porter Darby, B. S..................Montgomery Co., Md.
"Farm Fertilizers."

William Samuel Fendall, M. E..................Baltimore Co., Md.
"Design of a Jib Crane for the Foundry of the Maryland Agricultural College."

Arthur Roscoe Hirst, B. S....................Dorchester Co., Md.
"A Farm Survey."

Harry Nelson Lansdale, B. S...............Montgomery Co., Md.
"Analysis of Gasoline Air Gas."

Luther Eugene Mackall, B. A......................Calvert Co., Md.
"The Literary Art of William Shakespeare."

Robert Laurie Mitchell, B. S......................Charles Co., Md.
"Determination of Arsenic in Paris Green."

Thomas Badeley Symons, B. S. .... Talbot Co., Md.
"The Effect of Economic Entomology Upon Agriculture."

John Irving Wisner, B. S. .... Baltimore City, Md.
"A Farm Survey."

Graduate Degrees.

John Royce Laughlin, M. S. .... Washington, D. C.

Military Department Roster.

Major J. C. Scantling, U. S. A., Commandant.

Cadet Battalion.

Field and Staff.

E. P. Walls	Major.
C. P. Page	Captain and Battalion Adjutant.
E. Garner	First Lieutenant and Quartermaster.

Non-Commissioned Staff.

R. Hamblin	Sergeant Major.
A. T. Schenck	Chief Trumpeter.

Company "A."

J. M. Matthews	Captain.
H. K. Bradford	First Lieutenant.
J. N. Warfield	Second Lieutenant.
H. D. Watts	First Sergeant.
J. C. Cockey	Second Sergeant.
T. B. Mullendore	Third Sergeant.
D. E. Brown	Fourth Sergeant.
B. S. Dorsey	First Corporal.
W. P. Crone	Second Corporal.
L. W. Cruikshank	Third Corporal.
G. L. Wentworth	Fourth Corporal.
C. O. Birckhead, H. A. Postley	Musicians.

Company "B."

P. L. Peach	Captain.
S. B. Nichols	First Lieutenant.
C. N. Bouic	Second Lieutenant.
W. R. Mitchell	First Sergeant.

G. L. Sincell	Second Sergeant.
R. E. Naylor	Third Sergeant.
J. M. Turner	Fourth Sergeant.
G. R. Ogier	First Corporal.
J. H. Bay	Second Corporal.
B. S. Judd	Third Corporal.
C. G. Hines	Fourth Corporal.
R. J. Tillson, H. T. Rincke	Musicians.

Company "C."

R. W. B. Mayo	Captain.
E. B. Dunbar	First Lieutenant.
G. W. Cairnes	Second Lieutenant.
R. P. Choate	First Sergeant.
T. R. Gourley	Second Sergeant.
F. C. Farrall	Third Sergeant.
E. R. Sasscer	Fourth Sergeant.
R. V. S. Wright	First Corporal.
W. P. Roberts	Second Corporal.
W. T. Smith	Third Corporal.
F. O. Webster	Fourth Corporal.
H. A. Weiller	Musician.

Roster of Students.

Session 1901-1902.

Senior Class.

Bowman, J. B	Hyattstown, Md.
Coudon, J., Jr	Perryville, Md.
Darby, S. P	Sellman, Md.
Fendall, W. S	Towson, Md.
Hirst, A. R	Cambridge, Md.
Lansdale, H. N	Damascus, Md.
Mackall, L. E	Mackall, Md.
Mitchell, R. L	La Plata, Md.
Palmer, E. C	Washington, D. C.
Symons, T. B	Easton, Md.
Wisner, J. I	Baltimore Md.

Junior Class.

Bouic, C. N	Rockville, Md.
Bradford, H. K	Washington, D. C.
Cairnes, G. W	Jarrettsville, Md.
Calderon, M. A	Lima, Peru.
Collier, J. P	Ellicott City, Md.
Garner, E. T	Duley, Md.
Matthews, J. M	Dulaney's Valley, Md.
Mayo, R. W. B	Hyattsville, Md.
Page, C. P	Frederick, Md.
Peach, P. L	Mitchellsville, Md.
Walls, E. P	Barclay, Md.

Sophomore Class.

Anderson, J. A	Deal's Island, Md.
Brown, D. E	College Park, Md.
Burnside, H. W	Hyattsville, Md.
Candamo, J. V	Lima, Peru.
Cartwright, T. J	College Park, Md.
Choate, R. P	Randallstown, Md.
Cockey, J. C	Gwynnbrook, Md.
Cruikshank, L. W	Cecilton, Md.
Deaner, J. A. P	Boonsboro, Md.
Ensor, J. G	Belfast, Md.
Ewell, L. M	Baltimore, Md.
Fitzpatrick, E. J	Corydon, Pa.
Gourley, T. A	Burch, Md.
Gray, J. P	Glyndon, Md.
Hamblin, R	Wango, Md.
Jones, F. A	Comus, Md.
Lewis, J. R	Lewisdale, Md.
Mayo, E. C	Hyattsville, Md.
Meikle, R. J	Baltimore, Md.
Merritt, J. B., Jr	Easton, Md.
Merryman, E. W	Baltimore, Md.
Mitchell, W. R	La Plata, Md.
Moran, J. E	Washington, D. C.
Mullendore, T. B	Trego, Md.
Ogier, G. R	Baltimore, Md.
Rolph, W. C	Beltsville, Md.
Sasscer, E. R	La Plata, Md.
Shaw, S. B	Rehoboth, Md.
Sincell, J. L	Oakland, Md.
Stoll, E. W	Brooklyn, Md.

Street, J. McC.	Rocks, Md.
Turner, J. McL.	Taylor, Md.
Watts, H. D.	Belair, Md.
Webster, F. O.	Baltimore, Md.
Wentworth, G. L.	Washington, D. C.

Freshman Class.

Bay, J. H.	Jarrettsville, Md.
Byron, W. H.	Williamsport, Md.
Caul, H. J.	Buffalo, N. Y.
Coburn, T., Jr.	Garrett Park, Md.
Crone, W. U.	St. Michaels, Md.
Dent, W. P.	Oakley, Md.
Dorsey, B. S., Jr.	Mt. Airy, Md.
Doub, M. B.	Hagerstown, Md.
Duckett, M., Jr.	Hyattsville, Md.
Edgarton, E. W.	Washington, D. C.
Evans, H. H.	Rolphs, Md.
Farrell, F. C.	La Plata, Md.
Fenby, W. W.	Westminster, Md.
Gassoway, J. H.	Germantown, Md.
Goddard, J. B.	Williamsport, Md.
Green, E. F.	Wye Mills, Md.
Hardesty, W. G.	Willows, Md.
Hill, N. D.	Baltimore, Md.
Hines, C. G.	Chestertown, Md.
Hines, T. L.	Baltimore, Md.
Hoopes, R. D.	Bynum, Md.
Horner, T. H.	Ashland, Md.
Hull, W. S.	Lansdowne, Md.
Judd, B. S.	Washington, D. C.
Lupton, W. T.	Martinsburg, W. Va.
Mackall, J. N.	Mackall, Md.
Mayer, G. M.	Frostburg, Md.
Naylor, R. E.	Washington, D. C.
Nichols R. D.	Germantown, Md.
Parker, A. A.	Pocomoke City, Md.
Phillips, F. F.	Centreville, Md.
Popham, J. N., Jr.	Washington, D. C.
Price, L., Jr.	Hyattstown, Md.
Riggs, D.	Laytonsville, Md.
Roberts, W. P.	Landover, Md.
Shepherd, E. L.	Bristol, Md.
Smith, W. T.	Ridgely, Md.
Snaveley, E. H.	Sparrows Point, Md.

Somerville, J. W. P	Frostburg, Md.
Stanley, H	Laurel, Md.
Watts, H. F	Belair, Md.
Weiller, H. A	Catonsville, Md.
West, F. H	Howardville, Md.
Whiteford, C. P	Whiteford, Md.
Whiting, L. W	Hyattsville, Md.
Wright, R. V. L	Williamsport, Md.
Zerkel, L. F	Luray, Va.

Preparatory Department.

Alfert, R	New York, N. Y.
Betancourt, H	San Francisco, Cuba.
Birckhead, C. O	Friendship, Md.
Cockey, A. D	Gwynnbrook, Md.
Councilman, C. H. S	Mt. Wilson, Md.
Councilman, C. W. S	Mt. Wilson, Md.
Dorr, G. W	Hyattsville, Md.
Depkin, G. F. A	Baltimore, Md.
Duffy, H. A	Hancock, Md.
Duganne, A. C	Washington, D. C.
Ewell, A. T	Baltimore, Md.
Fesmyer, C. R	Centreville, Md.
Friend, J. T	Lappans, Md.
Grason, S. C	Towson, Md.
Hormes, H. W	Baltimore, Md.
Pike, D. B	Washington, D. C.
Plumacher, E. H	Maracaibo, Venezuela.
Plumacher, M. C	Maracaibo, Venezuela.
Postley, H. A	New York, N. Y.
Power, E	Derwood, Md.
Ramonet, J	Puerto Principe, Cuba.
Rice, R. W., Jr	Baltimore, Md.
Richardson, N. C	Marion, Md.
Rinck, H. T	Lakeland, Md.
Robey, S. D., Jr	Pomfret, Md.
Rodriguez, H	Puerto Principe, Cuba.
Rossi, J	Puerto Principe, Cuba.
Ruiz, R	Puerto Principe, Cuba.
Rutledge, J. C	Rutledge, Md.
Schenck, A. T	Baltimore, Md.
Tate, J	Washington, D. C.
Tillson, R. J	Davis, W. Va.
Torrington, H. E	New York, N. Y.
Towner, J. B	Perryman, Md.
Varona, J. C	Havana, Cuba.

Williamson, P. H	Hyattsville, Md.
Williamson, R. G	Hyattsville, Md.
Williar, H. D., Jr	Ruxton, Md.
Wood, R. V	Barnesville, Md.

Two Year Special Students in Agriculture.

Second Year.

Dunbar, E. B	Springville, N. Y.
Nichols, S. B	Germantown, Md.
Warfield, J. W	Florence, Md.

First Year.

Bryan, T. E	Centreville, Md.

Short Winter Course Students.

Bartlett, G. L	Easton, Md.
Evans, W. H	Chase, Md.
Fuss, H. R	Union Bridge, Md.
Faucett, W	Colesville, Md.
Gravatt, G. W	Denton, Md.
Johnson, T. B	Elvaton, Md.
Koogle, C. E	Boonsboro, Md.
Lickle, J. W	Baltimore, Md.
Lynch, R. F	Rockdale, Md.
Sauble, E. V	Woodensburg, Md.
Smith, F	Sharpsburg, Md.

Apprentices.

Allen, R. S., Dairying	Rising Sun, Md.
Grier, E. T., Horticulture	McIntyre, Md.
Middleton, E. W., Dairying	Berwyn, Md.
Muller, H., Dairying	Long Green, Md.

Summary of Students.

Senior Class	11
Junior Class	11
Sophomore Class	35
Freshman Class	47
Preparatory Class	39
Two-Year Students	4
Short Course Students	11
Apprentices	4
Total	162

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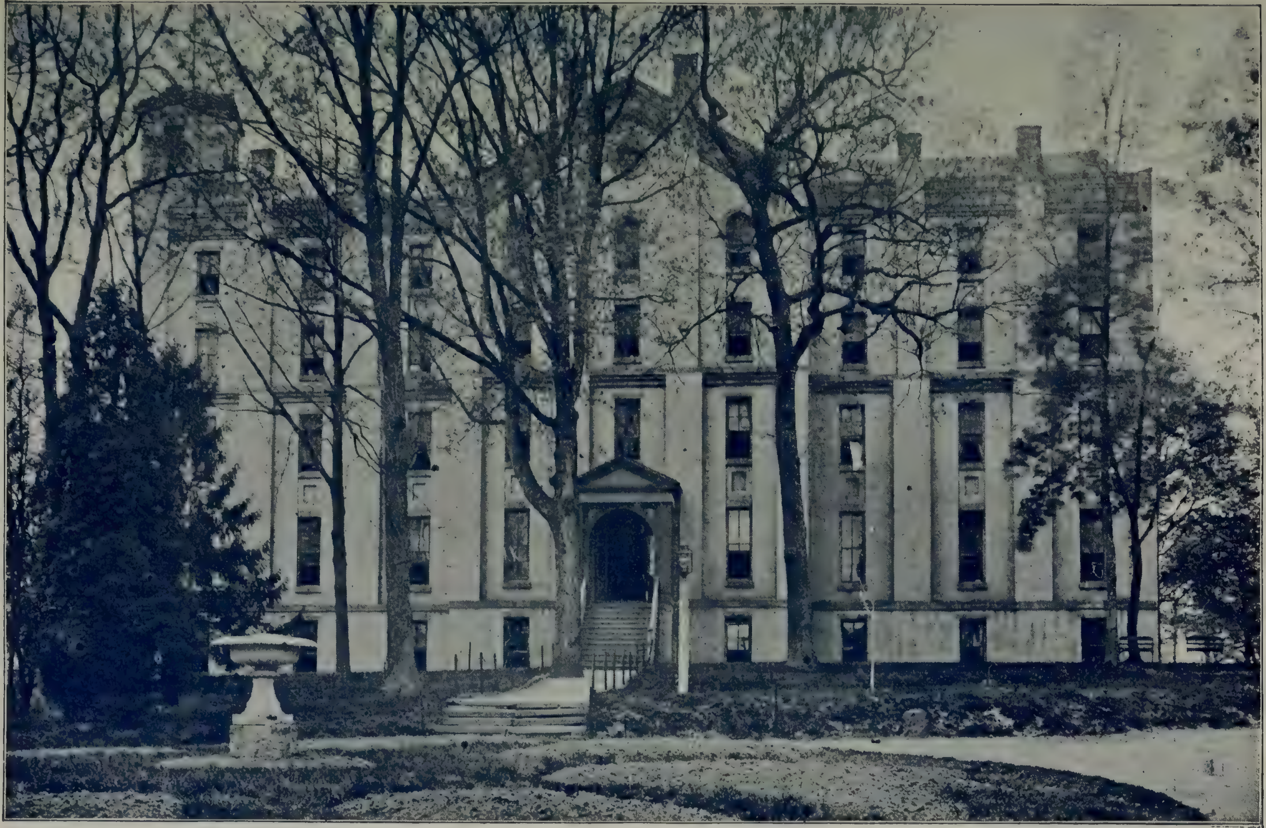
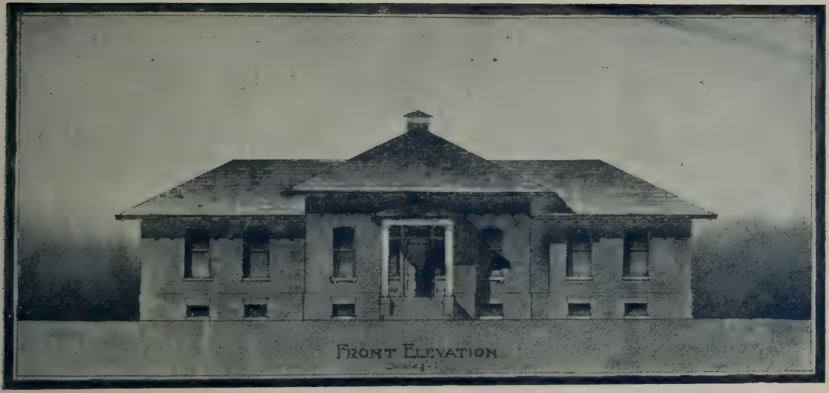


BARRACKS.

VIEW OF GREENHOUSES AND BARRACKS.



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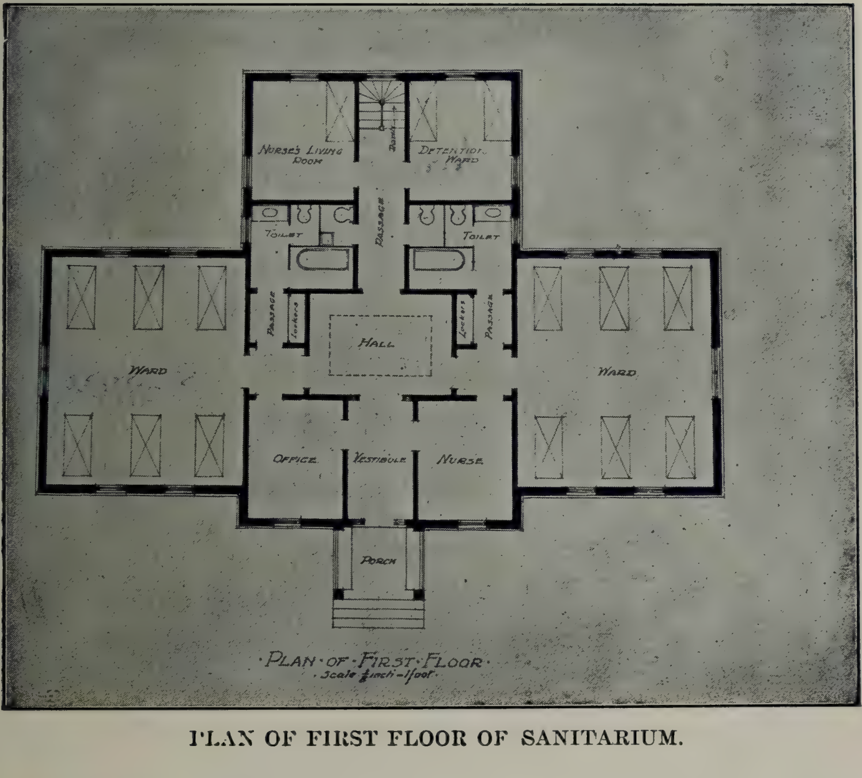

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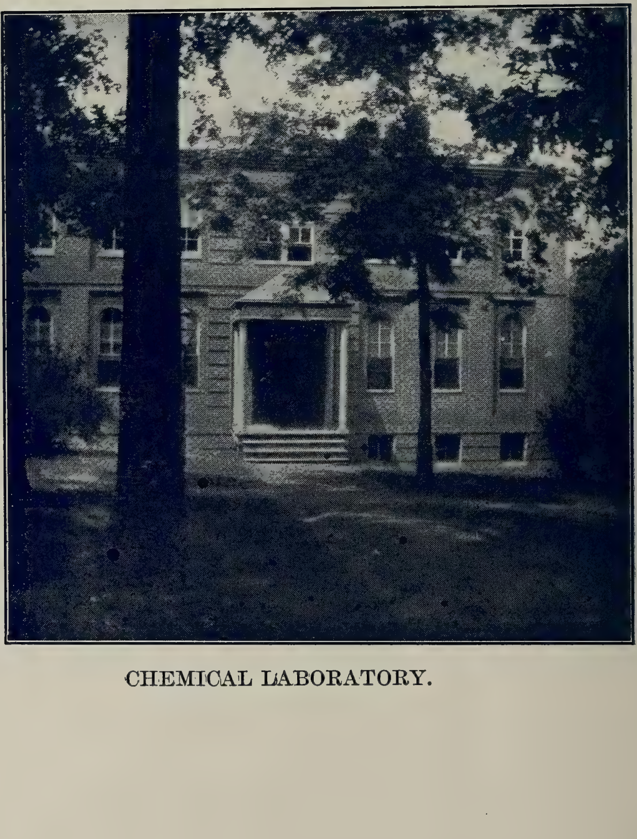
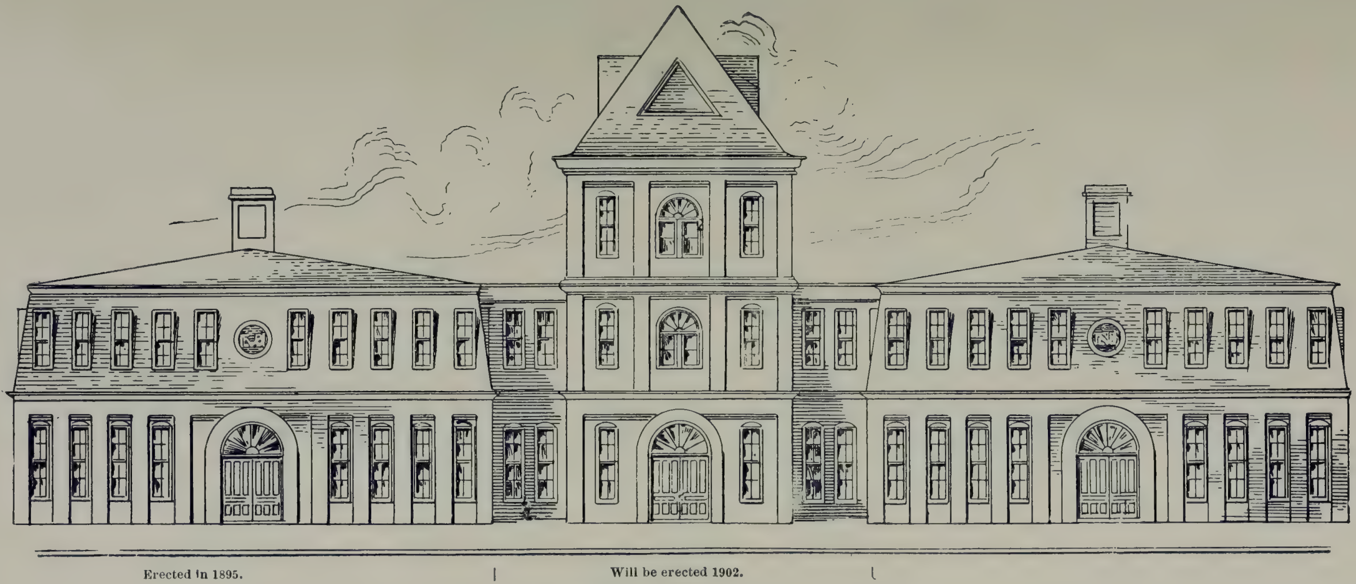


CHEMICAL LABORATORY.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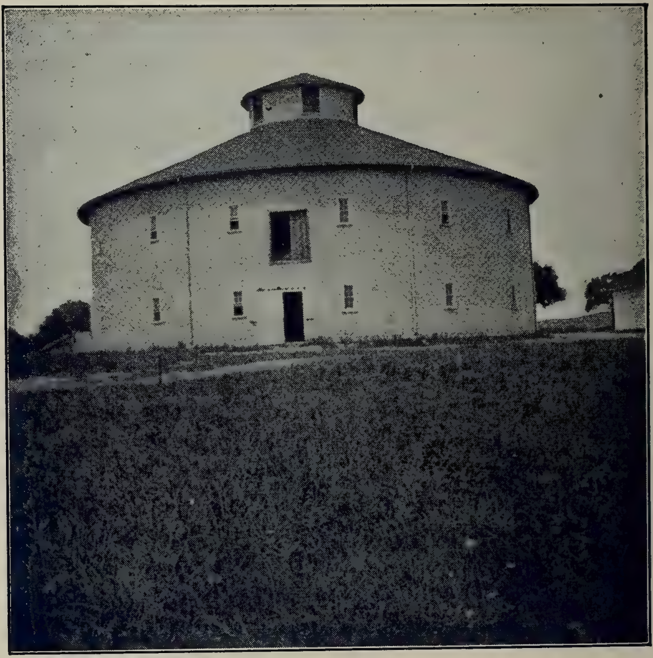
Will be erected 1902.

THE PROPOSED MECHANICAL BUILDING.



A MODEL BARN.

DRAFTING ROOM.

INSTRUCTION OF ORCHARD INSPECTORS.

FRESHMAN CLASS IN HORTICULTURE—PRUNING TREES.

ARBOR DAY—JUNIOR CLASS.

ARBOR DAY—SENIOR CLASS.

ARTILLERY DRILL.

FOOTBALL TEAM.

BASEBALL TEAM.

THE BATTALION.

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UNIVERSITY OF ILLINOIS

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Maryland Agricultural College

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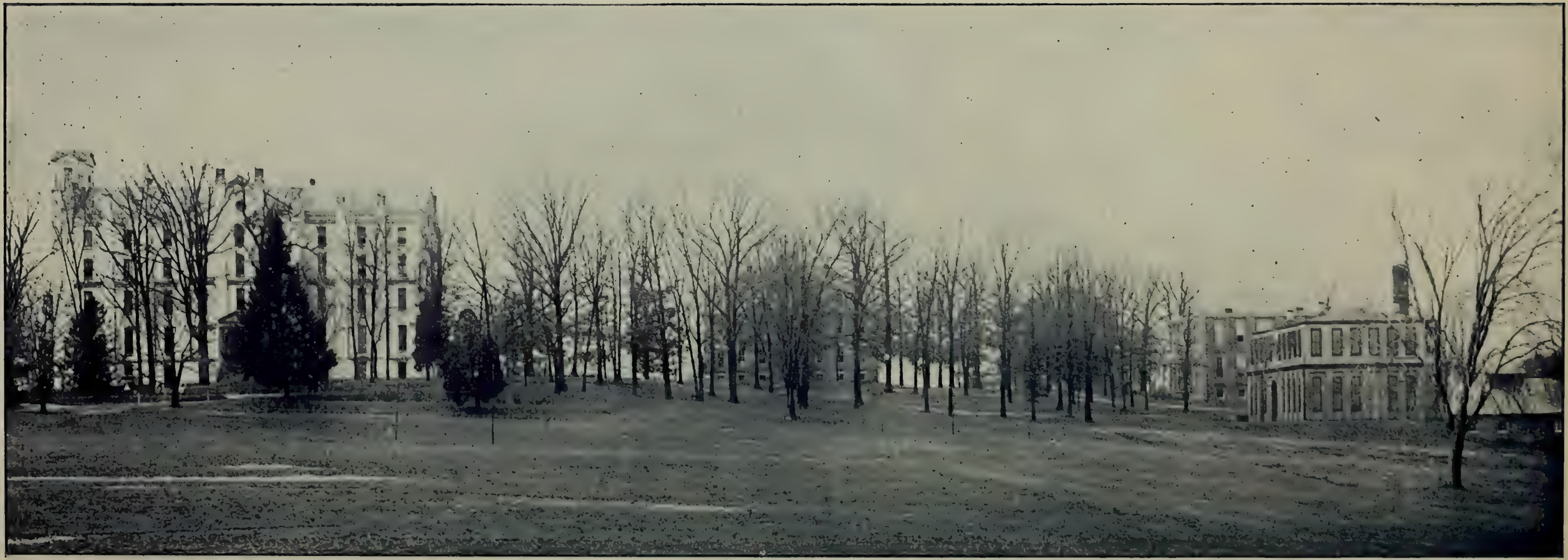

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MARYLAND

Agricultural College,

COLLEGE PARK, MARYLAND.

CATALOGUE.

YEAR 1903-4.

Persons wishing to receive the College Catalogue, or desiring any information concerning the College or its work, may address

R. W. SILVESTER, PRESIDENT,
Maryland Agricultural College,
College Park, Md.

C. & P. Telephone, Hyattsville, 43.
Telegraph Station, Hyattsville, Md.
Express Office, College Station, B. & O. R. R.

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Chas. A. Councilman, Esq., Glyndon, Md	"	"	1908.

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Committee on Finance,

Messrs. Vandiver, Stanley, Walsh, Munroe and Hering.

Committee on Education,

Messrs. Evans, Walsh, Hering, Hubner and Purnell.

Committee on Facilities for Instruction,

Messrs. Munroe, Raynor, Hill and Purnell.

Committee on Auditing,

Messrs. Vandiver, Stanley and Slagle.

Committee on Eastern Branch,

Messrs. Slagle and Merryman.

Committee on Buildings and Grounds,

Messrs. Councilman, Hill, Slagle, Stanley and Evans.

Executive Committee,

Messrs. Stanley, Vandiver, Evans, Munroe, Slagle and Councilman.

Officers and Faculty of Instruction.

R. W. SILVESTER,
President and Professor of Mathematics.

EZRA B. FULLER, Major 7th U. S. Cavalry, Commandant of Cadets.

Thomas H. Spence, A.M	Vice-President and Professor of Languages.
H. B. McDonnell, M.D., B.S	Professor of Chemistry and State Chemist.
W. T. L. Taliaferro, A.B	Professor of Agriculture.
James S. Robinson	Professor Emeritus of Horticulture.
Samuel S. Buckley, M.S., D.V.S	Professor of Veterinary Science.
Henry Lanahan, A.B	Professor of Physics and Civil Engineering.
F. B. Bomberger, B.S., A.M	Professor of English and Civics.
Charles S. Richardson	Director of Physical Culture and Instructor in Public Speaking.
J. Hanson Mitchell, M.E	Professor of Mechanical Engineering.
J. B. S. Norton, M.S	Professor of Vegetable Pathology and Botany and State Pathologist.
C. F. Austen, B.S	Associate in Horticulture.
T. B. Symons, B.S	Associate Professor of Entomology and State Entomologist.
Henry T. Harrison	Principal of Preparatory Department.
J. C. Blandford, M.E	Assistant in Mechanical Department.
C. F. Doane, M.S	Instructor in Dairying.
A. B. Foster, B.S	Assistant in Chemistry.
Frederick H. Blodgett, M.S	General Assistants in Entomology, Vegetable Pathology and Botany and State Work.
R. I. Smith, B.S	
R. W. B. Mayo, A.B	Assistant in Department of Languages.
J. B. Robb, M.S	Assistants in Chemistry (State Work).
T. R. Gough, B.S	
H. N. Lansdale, B.S	
Joseph R. Owens, M.D	Registrar and Treasurer.
W. O. Eversfield, M.D	Physician in Charge.
Miss M. L. Spence	Stenographer and Typewriter.
Mrs. L. K. Fitzhugh	Matron.
E. T. Harrison	Librarian and Executive Clerk.

The arrangement of heads of departments is in order of seniority of service; assistants in college work in the same order, and State work likewise.

Calendar for 1903-1904.

First Term.

September 15th and 16th	Entrance Examinations.
Thursday, September 17th, 1 P.M.	College Work Begins.
Friday, October 9th	Meeting of Board of Trustees.
Friday, December 11th	Meeting of Board of Trustees.
Tuesday, December 22d, 4 P.M.	First Term Ends.
Tuesday, December 22d, 4 P.M., to Tuesday, January 5th, noon	Christmas Holidays.

Second Term.

Tuesday, January 5th, noon	Second Term Begins.
Friday, March 11th	Meeting of Board of Trustees.
Wednesday, March 30th, 4 P.M	Second Term Ends.
Wednesday, March 30th, 4 P.M., to Tuesday, April 5th, 1 P.M	Easter Holidays.

Third Term.

Tuesday, April 5th, 1 P.M	Third Term Begins.
June 7th to 10th	Final Examinations.
Friday, June 10th	Meeting of Board of Trustees.
Sunday, June 12th	Baccalaureate Sermon.
Monday, June 13th	Class Day.
Tuesday, June 14th	Alumni Day.
Wednesday, June 15th, 11 A.M	Commencement Day Exercises.

Historical Sketch.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6th, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original college building was erected, and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges were doing for the country, passed the "Land-grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became in part, at least, a State institution, and such it is at the present time.

In 1887 the Federal Congress passed a second important Act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees, so far separated it from the College as to put it under a special Director, who is directly responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments, in the form of bulletins, for the information and guidance of those interested in agriculture. Since the inception of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well-recognized factor in the agricultural development of Maryland.

Once more, in 1892, the Federal Government came to the aid of the agricultural and mechanical colleges. By the Act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of the agricultural and mechanical colleges. The primary object of this legislation was the development of the departments of agricultural and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College, and a somewhat similar institution for the education of colored students, located at Princess Anne, on the Eastern Shore of Maryland.

During the last ten years the history of the College has been that of steady growth. This fact is evidenced by the increased numbers of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory, the mechanical engineering building (recently enlarged), Morrill Hall, the college barn, sanitarium and the new Administration building and barracks as well as by the establishment of the Department of Farmers' Institutes and the Departments of State Entomology and State Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

Location and Description.

The Maryland Agricultural College is located in Prince George's County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least eight trains a day, from each city, stop at College Station, thus making the place easily accessible from all parts of the State. The telegraph station is Hyattsville, connected with the College by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north, on the same road. Connection with Washington may be had by steam and electric railway.

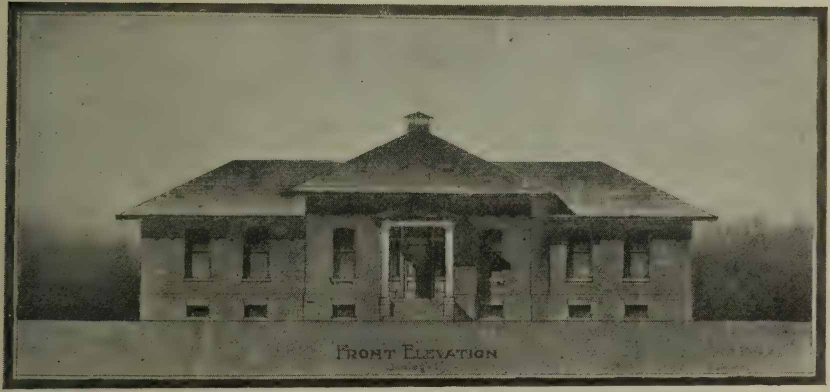
The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres, and is devoted to the gardens, orchards, vineyard and to general farming.

The main College building is of brick, five stories in height. It contains the students' quarters, mess hall, chapel, lecture rooms and offices. The dormitories are large, well ventilated, and provided with fire escapes, and bath and water rooms. All the buildings are lighted with gas and heated with steam from central plants on the College grounds. An addition to the main building has been erected, containing commodious bath rooms on each floor, with the most modern appliances for the comfort and health of the students.

The Mechanical Engineering Department is located in a two-story brick building, completed in 1896, and now throughly equipped. It contains workshops for carpentry and forging, machinery rooms, a drawing room, library and office. It is a model building of its kind.

The chemical building was completed in 1897 and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals, which work is assigned to the Professor of Chemistry at this College by an Act of the General Assembly. He is thus the State Chemist.

In 1894 the present building of the gymnasium and library was erected. The gymnasium on the ground floor is well furnished with modern athletic appliances. The library and reading room is on the second floor and is a large, well-lighted and convenient room for the purpose.



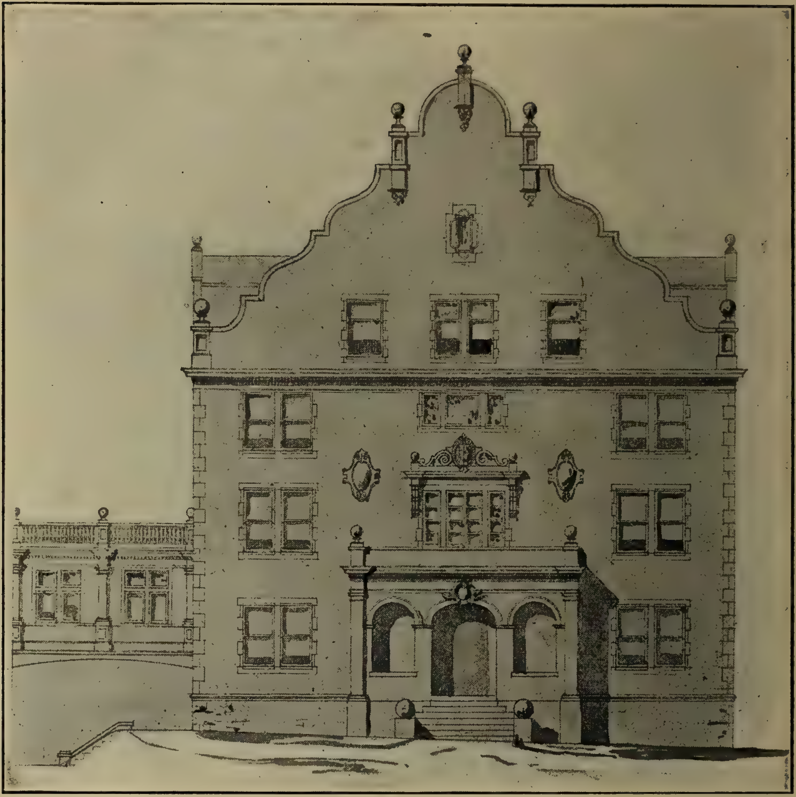
SANITARIUM.

One of the most noteworthy additions to the group of College buildings is Morrill Hall. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Biology, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments have suffered, and greatly extending their opportunities for the development of high-grade scientific work.

A modern sanitarium, well equipped—a long-felt want—has now been completed and furnished, and is ready for occupancy. Our patrons will no doubt be gratified to learn of this addition. Any form of contagious disease can thus be isolated, and the work of the College be continued without danger to those remaining.

Another important improvement to the working facilities of the College and farm is a new and model barn. Especial attention is invited to the arrangement of this building, which is in many ways an example of an almost perfect general utility farm building.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.



EAST ELEVATION OF THE ADMINISTRATION HALL AND DORMITORIES, NOW IN COURSE OF CONSTRUCTION.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

Provision for Enlargement and Repair of Buildings.

At the last session of the Legislature $25,000 was appropriated for making greater accommodations for the increasing demand for matriculation and $5,000 for an addition to the mechanical building.

These improvements are now well under way, and the contract with the builder requires that at least two floors of the new building be ready for occupancy September 15th, 1903.

The new building is designed for Administration offices, a large drill hall and armory and a commodious assembly hall. (See cuts).

The addition to the Mechanical Engineering Building will relieve the congestion which has been caused by a largely increased number of students taking this course.

NORTH ELEVATION OF ADMINISTRATION HALL AND DORMITORIES, NOW BEING CONSTRUCTED.

General Aim and Purpose.

The Agricultural College is the State School of Science and Technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of the man of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to the many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering, the natural and physical sciences and belle lettres, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has been prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman year, a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore year, the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior year, until in his last, or Senior year, his work consists wholly of one or more closely-connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratories and mechanical workshops a student is able to become so proficient in his chosen line of work that when he leaves the College a career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education to the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

Departments---Equipment and Work.

The following is a brief account of the equipment of the several departments of the College and the general character of the instruction given in each:

Agricultural Department.

W. T. L. Taliaferro, Professor.
C. F. Doane, Instructor in Dairying.

The Agricultural Department offers four courses—(a) a four-years' course, leading to the degree of B. S.; (b) a special two-years' course, for proficiency in which a certificate is awarded (see p. 49); (c) a special creamery course; (d) a ten-weeks' winter course (see p. 49).

Outline of Four-Years' Course.

Course I, Live Stock—*First Term, Freshman Year—Eight periods per week; four theoretical, four practical.* This course is devoted to the detailed study of farm live stock. Professor Curtiss' "Horse, Cattle, Sheep and Swine" is used as a text-book, supplemented by the "Breeders' Gazette," "Hoard's Dairyman" and other live stock journals and experiment station bulletins for collateral reading and for reference. Practical lessons are drawn from the stock on the Experiment Station farm. The United States Cattle Quarantine Station for the port of Baltimore is but a few miles from the College, by the B. & O. R. R., and whenever there is an importation of stock of special merit the agricultural students are taken to the Quarantine Station to inspect and study the importation. Another feature of this course is the visiting by the students of private stock farms in various parts of the State to study not only the stock itself, but methods of handling it.

Scoring Horses.

Course II, Elementary Agriculture—*Third Term, Freshman Year—Eight periods per week; four theoretical, four practical.* The elementary principles of agriculture, including the composition of soils and plants, the mechanical conditions of soils, cultivation, manures and fertilizers, rotations, plant reproduction and selection of seed.

This course aims to give a comprehensive though elementary knowledge of the principles of improved agriculture and their practical application.

Course III, Crop Production—*First Term, Sophomore Year—Five periods per week; three theoretical, two practical.* Crop production, the study of farm crops in detail, as to history, uses and requirements, including local adaptation, varieties, fertilization, cultivation, harvesting. Morrow & Hunt's "Soils and Crops" is the text-book. The College farm furnishes the opportunity for the practical handling of farm crops.

A Corner in the Alfalfa Field.

Course IV, Soils—*Second Term, Sophomore Year—Seven periods per week; three theoretical and four practical.* The study of the physical and chemical conditions of the soil in their relation to agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too strongly emphasized. The study of this important subject is conducted by means of lectures, text-book, laboratory and field work. The text-book used is Prof. King's "The Soil." No State in the Union, perhaps, possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

Scoring Corn.

Course V—*Third Term, Sophomore Year—Five periods per week; three theoretical, two practical.* This term is devoted particularly to the study of the planting and handling of spring crops. The selection and scoring of seed corn and other grains is made a specialty. The first breeding plat of corn in the State of Maryland was planted in the spring of 1903 by the students taking this course.

Course VI—*First Term, Junior Year—Seven periods per week; three theoretical, four practical.* (a) **Farm Machinery:** lectures and practical work. (b) **Drainage:** practical work and text-book. Waring's "Drainage for Profit and Health."

Course VII, Stock Breeding—*Second Term, Junior Year—Four periods per week; two theoretical, two practical.* The principles of stock breeding. The wonderful success which has attended the efforts of well-informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to, the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text-book in this course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

Course VIII, Fertilizers and Soil Fertility—*First Term, Senior Year—Ten periods per week.* Text-books, Vorhees' "Fertilizers," Robert's "Fertility of the Land" and Experiment Station bulletins.

Course IX, Dairying and Creamery Work—*Second Term, Senior Year—Ten periods per week, theoretical and practical.* Text-books: Wing's "Milk and its Production," Russell's "Dairy Bacteriology," Farrington & Wall's "Testing Milk."

Other work in the Senior Year will be arranged on consultation with the head of the department.

Geology.

Course I, Geology—*First and Second Terms, Freshman Year—Four periods per week first term, five the second.* This course is required in the Agricultural and General Science Courses. Attention is chiefly given to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions. Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference.

Department of Mechanical Engineering.

J. Hanson Mitchell, Professor.
J. C. Blandford, Assistant.

This department offers a course to those who desire to prepare themselves to design and construct machinery and superintend engineering establishments. With this end in view is offered an education based on Mechanics, Drawing, Mathematics, Physics and Modern Languages, together with a practical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department, and the hours alloted to each, will be found in the "Outline of Courses."

Equipment.—The Mechanical Engineering Laboratory is a two-story brick building, 45 feet by 60 feet, contains the carpenter, forge and foundry, and machine shops, one drafting and two lecture rooms. An annex, 25 feet by 50 feet, contains two 60-horse power boilers, which furnish steam for power, heat and experimental purposes.

View in Shops.

The carpenter shop contains accommodations for twelve students in bench work and wood-turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grinding stone.

In the forge shop are nine power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smith tools for each forge. The moulding and casting is done in the same room as the forge work, and great attention is given this branch, as a knowledge of the foundry work is very essential to the engineer. The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, and with the necessary flasks and tools.

The machine shop contains one Reed 10-inch speed lathe, one 24-inch Gray planer, one 12-inch Reed combined foot and power lathe, a Diamond No. 4 emory tool grinder, one 14-inch Reed engine lathe, a Snyder 24-inch drill press, one 20-inch engine lathe and an assortment of vises, taps, dies, pipe tools and measuring instruments.

An 8-inch by 12-inch engine drives the machinery of the different shops. It was presented to the College by the city of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue print facilities.

Tours of Inspection.—The members of the Senior Class go to Baltimore or Washington for the purpose of inspecting well-known manufacturing plants.

Course I, Mechanical Drawing—*Three Terms, Freshman Year—Six periods per week.* Practice in plain lettering, use of instruments, projections and simple working drawings; the plates upon completion being enclosed in covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

Course II, Technical Instruction—*First Term, Freshman Year—Five periods per week.* Explanation of the reading of mechanical drawings. The proper cutting, angles, care and adjustment of carpenter tools. Relative strength of wood joints. Wood: Its shrinking and warping, and how to correct and prevent. Text, Goss' "Bench-work in Wood." Drill in problems in Arithmetic, Algebra and Drawing, by notes and lectures.

Course III, Shop Work—*Three Terms, Freshman Year—Six periods per week.* Use and care of carpenter tools; exercises in sawing, mortising, tenoning and laying out work from drawings; wood-turning and pattern-making.

Course IV, Mechanical Drawing—*Three Terms, Sophomore Year—Six periods per week first term; four the second; five the third.* Free-hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading. Text-book, Rouillion's "Mechanical Drawing."

View in Shop.

Course V, Elementary Applied Mechanics—*First Term, Sophomore Year—Four periods per week.* Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting, and bending movements of beams. Jamieson's "Applied Mechanics" is the text used.

Course VI, Blacksmithing—*Three Terms, Sophomore Year—Six periods per week.* The elementary operations of drawing out, upsetting, bending and welding of iron, and making and tempering of steel tools; moulding and casting in iron, and the management of the cupola.

Course VII, Elementary Machine Design—*Three Terms, Junior Year—Six periods per week.* The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Wells' "Engineering, Drawing and Design" is the text used.

Course VIII, Shop Work—*Three Terms, Junior Year—Six periods per week.* Elementary principles of vise and machine work, which includes turning, planing, drilling, screw cutting and filing. This is preceded by a study of the different machines used in the machine shops.

Course IX, Descriptive Geometry—*Second and Third Terms, Sophomore Year—Three periods per week second term; two periods the third.* Its relation to mechanical drawing, and solution of problems relating to magnitudes in space, bearing directly upon those principally used by the mechanical engineer. Text-book, Faunce's "Descriptive Geometry."

Course X, Steam Engine and Boilers—*First Term, Junior Year—Four periods per week.* The principles of steam and the steam engine. The slide valve and valve diagrams; the indicator and its diagram; steam boilers, the various types and their advantages, including the method of construction. Text used is Jamieson's "Steam and Steam Engines."

Course XI, Power Plants—*First Term, Senior Year—Two periods per week.* Lectures on the location, construction, equipment and engineering of power plants.

Course XII, Machine Design—*Three Terms, Senior Year—Four periods per week first term, six the second and four the third.* The calculation and design of pipes, belt and tooth-gearing, beams and cranes. Text, Low & Bevis' "Machine Drawing and Design."

Course XIII, Shop Work—*Three Terms, Senior Year—Eight periods per week first term, ten periods second and third terms.*—Advanced machine work; the laying out, assembling and construction of some piece of machinery, such as an engine lathe or dynamo.

Course XIV, Testing—*Third Term, Senior Year—Six periods per week.* A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam guages, slide valve setting and indicator practice. The slide rule, and determining the amount of moisture in steam.

Department of Mathematics.

R. W. SILVESTER, Professor.
HENRY T. HARRISON, Assistant.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our college course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

Course I, Higher Arithmetic—*First Term, Freshman Year—Three periods per week.* General review of principles of arithmetic, as applied to stating equations, mensuration, etc. Text-book, Robinson's Test Problems.

Course II, Algebra—*First and Second Terms, Freshman Year—Five periods per week.* Text-book, Wentworth's College Algebra.

Course III, Plane Geometry—*Second and Third Terms, Freshman Year; First Term, Sophomore Year—Three to five periods per week.* Text-book, Wentworth's Plane Geometry, completed.

Course IV, Solid Geometry—*First and Second Terms, Sophomore Year—Four periods per week.* Text-book, Wentworth's Solid Geometry, completed.

Course V, Trigonometry—*Second and Third Terms, Sophomore Year—Four periods per week.* Text-book, Wentworth's Plane Trigonometry, completed.

Course VI, Higher Algebra—*Third Term, Sophomore Year—Four periods per week.* Text-book, Wentworth's Higher Algebra.

Course VII, Analytical Geometry—*First Term, Junior Year—Five periods per week.* Text-book, Wentworth's Analytics.

Course VIII, Differential Calculus—*Second Term, Junior Year—Five periods per week.* Text-book, Osborne's, completed.

Course IX, Integral Calculus—*First Term, Senior Year—Five periods per week.* Text-book, Osborne's, completed.

Department of English and Civics.

F. B. BOMBERGER, Professor.

CHARLES S. RICHARDSON, Assistant.

This department, as its names implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English of necessity lies at the base of all other courses of instruction. A clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature (English and American), theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and thesis writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

English Courses.

Course I, Language and Composition—*Three Terms, Freshman Year—All students—Five periods per week.* English language, review of grammar, practical exercise in analysis and synthesis, composition and letter-writing. Texts used, Lockwood's "Lessons in English" and Beuhler's "Exercises in English."

Course II, Rhetoric and Composition—*First and Second Terms, Sophomore Year—All students—Four periods per week.* Principles and practice of rhetoric and composition. Text used, Lockwood and Emerson's "Composition and Rhetoric."

Course III, Logic—*Third Term, Sophomore Year—Classical, Scientific and Mechanical Students—Three periods per week.* Principles and practice of logic. Text used, Jevon's-Hills "Logic."

Course IV, Composition—*Three Terms, Junior Year—All students—One period per week.* Practice in English Composition. Special lectures.

Course V, English Literature—*First and Second Terms, Junior Year—Classical students only—Five periods per week.* Text-book, lectures, readings, composition. Texts used, Pancoast's "English Literature," Halleck's "English Literature" and Taine's "English Literature."

Course VI, American Literature—*Third Term, Junior Year—Classical students only—Five periods per week.* Text-book, lectures, readings, composition. Text used, Pattee's "American Literature."

Course VII, English Classics—*Three Terms, Senior Year—Classical students only—Four periods per week.* Critical study of English classics, following the outline for college entrance requirements in English.

Course VIII, Literary Criticism—*First Term, Senior Year—Classical students only—Three periods per week.* Text and lectures. Text used, Winchester's "Principles of Literary Criticism."

Course IX, Psychology—*Second and Third Terms, Senior Year—Classical students only—Four periods per week.* Principles of Psychology. Text-book and lectures. Text used, Dewey's "Psychology."

History and Civics Courses.

Course I, English History—*First Term, Freshman Year—Two periods per week.*

Course II, Ancient History—*Second and Third Terms, Freshman Year—Classical students only—Five periods per week.* Outlines of Ancient History. Text-book and lectures. Text used, Myer's "Ancient History."

Course III, Mediæval and Modern History—*First and Second Terms, Sophomore Year— Classical students only—Four periods per week.* Outlines of Mediæval and Modern History; text-book and lectures. Text-book used, Myer's "Mediæval and Modern History."

Course IV, Political Science—*First Term, Junior Year—Classical students only—Five periods per week.* Government; special lectures on Constitution of Maryland. Text-books used, Wilson's "The State," and Bryce's "American Commonwealth"

Course V, American Government—*Second and Third Terms, Junior Year—Classical, Scientific and Mechanical students—Three periods per week.* Civil Government in the United States. Text-books used, Fiske's "Civil Government," Hinsdale's "American Government," and Clark's "Outlines of Civics."

Course VI, Business Law—*First Term, Senior Year—Classical students only—Three periods per week.* Lectures on "Business Law" as used in everyday life. Text used, Parsyn's "Commercial Law."

Course VII, Political Economy—*Second and Third Terms, Senior Year—Classical and Mechanical students—Four periods per week.* Principles of Political Economy and Industrial Development of the United States, Economic Science and Current Problems. Text used, Walker's "Political Economy."

Department of Chemistry.

Dr. H. B. McDonnell, Professor.

A. B. Foster, Assistant.

This department is charged with two distinct classes of work: (1) the State fertilizer and food control, and (2) the instruction of students. The State work necessitates the publication of the "Quarterly," which is usually made up of the results of analysis of fertilizers and feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of this work, the assistants invariably being college graduates.

The chemical laboratory building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room, with first-class chemical and assay balances, and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and material are provided from the supply room, as needed.

The department is provided with a small but well-selected library of standard reference books on chemistry, to which additions are made from time to time.

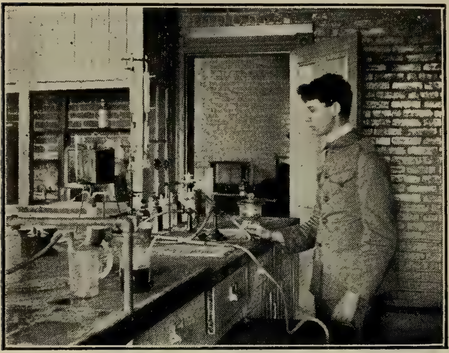
Instruction in chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil; the elements entering into the composition of plants and animals; the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry which is essential in the education of every man, no difference what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Students' Desk—Sophomore Class.

Chemistry becomes an elective study in the Junior year, when an advanced course in general chemistry is given, together with qualitative analysis, quantitative analysis, mineralogy and chemical technology. Four hours per week are devoted to the lecture room, and from twelve to fifteen hours to laboratory work.

During the senior year the work consists of organic chemistry and agricultural chemical analysis, including analysis of fertilizers, feeding stuffs, water, etc., and a short course in assaying. The work of the last term consists, mainly, in the preparation of a thesis involving original work.

The object of the full chemistry course is to prepare the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture. The demand for our graduates for such positions is far in excess of the supply.



Students' Desk—Senior Class.

Each student in chemistry is charged $6.00 per year to partly cover the expense of the material used. This does not include breakage of apparatus, which is charged extra. This charge seldom exceeds one or two dollars in the Sophomore year, or two or three dollars in the Junior or Senior year, depending upon the habits of the student.

Course I, General Chemistry—*Sophomore Year—Four periods per week.* Lectures and recitations. Text-book, Remsen's "Introduction to the Study of Chemistry."

Course II—*Sophomore Year—Three periods per week for the first and third terms, four for the second term.* Practical Course in Chemistry to accompany Course I. The students perform the experiments.

Course III, Advanced Chemistry—*Junior Year—Three or four periods per week.* Text-book, Remsen's "Advanced Chemistry."

Course IV, Qualitative Analysis—*First Term, Junior Year—Lectures, two periods per week; practical, twelve periods per week.* Text-book, Mason's "Qualitative Analysis."

Course V, Mineralogy—*Second Term, Junior Year—Lectures, two periods per week; practical work, four periods per week.* Brush's "Determinative Mineralogy."

Course VI, Quantitative Analysis—*Second Term, Junior Year—Six periods per week, most practical.* Quantitative Analysis begun. Determination of water, iron, magnesium, calcium, the common acids, etc. Reference book, Fresenius "Quantitative Analysis."

Course VII, Assaying—*Third Term, Junior Year—Four periods per week.* Reference book, Brown's "Manual of Assaying."

Course VIII, Volumetric Analysis—*Third Term, Junior Year—Eight periods per week, mostly practical.* Reference books, Fresenius' "Quantitative Analysis" and Sutton's "Volumetric Analysis."

Course IX, Organic Chemistry—*Senior Year—Four periods per week.* Lectures and recitations. Reference book, Remsen's.

Course X, Organic Preparations—*First and Second Terms, Senior Year—Four periods per week.*

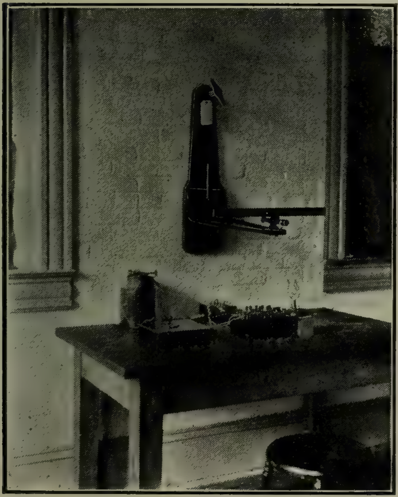
Course XI, Agricultural Chemical Analysis—*First and Second Terms, Senior Year—Eight periods per week.* Text-book, "Methods of Analysis of the Association of Official Agricultural Chemists."

Course XII—*Third Term, Senior Year—About twelve to eighteen periods per week.* This course is the preparation of a thesis involving original research in some branch of Agricultural or Industrial Chemistry.

Post Graduate Work. The department will arrange advanced courses in Agricultural Chemistry for graduate students.

Department of Physics.

HENRY LANAHAN, Professor.



Apparatus for Measuring Electrical Resistance.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

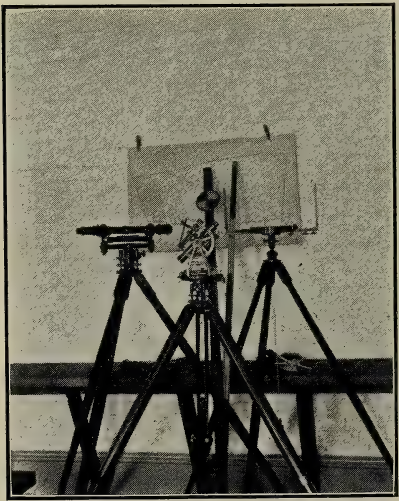
Course I, Elementary Physics—*First and Second Terms, Sophomore Year—Two periods per week.* The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "High School Physics."

Course II, Physics—*Three Terms, Junior Year—Four periods per week class-room work, and four periods per week laboratory work.* The course begins with a review of mechanics, after which heat, sound, electricity and magnetism and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurement. Written reports of the work done in the laboratory are required weekly. The text books used are "Theory of Physics," Ames, and "Manual Experiments in Physics," Ames and Bliss.

Course III—*Three Terms, Senior Year.* More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

Department of Civil Engineering.

HENRY LANAHAN, Professor.



A Group of Surveying Instruments.

Course I, Surveying—*Three Terms, Junior Year—Two periods per week class-room work; three periods per week field practice.* The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; the dividing of land; the theory of the stadia; true meredian lines; leveling; topographical surveying; railroad curves and cross-sectioning. Texts, Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual." If time permits, the methods of locating and staking out new roads will be taken up, and some attention given to road construction. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level.

Course II, Graphic Statics—*First Term, Senior Year—Four periods per week.* Including the theory and practice of the graphical methods of determining stresses in framed structures, particularly roof trusses; and bending movements and shears in beam. The course is based on Hoskins' "Graphic Statics," and many of the problems are solved analytically as well as graphically.

Course III, Strength of Materials—*Second Term, Senior Year—Four periods per week.* Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns and shafts. The text used in Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.

Course IV—*Three Terms, Senior Year.* A course in railroad and highway location and construction is also offered. Texts, Searles' "Field Engineering," Spalding's "Roads and Pavements," and the reports of the highway division of the Maryland Geological Survey.

Department of Horticulture.

James S. Robinson, Professor Emeritus.

C. F. Austin, Associate Professor.

Course I—*Third Term, Sophomore Year—Seven periods per week.* Lectures and practical work. (1) Methods of plant propagation. (2) Character of soil as best adapted to the different fruits and vegetables. (3) Methods of management of soils and soil improvements. (4) Manure, composts and commercial fertilizers. (5) Hot-beds and cold-frames. The practical work is intended to give students a knowledge of the operations in the garden and orchard. These exercises will be supplemented by familiar talks on the operations performed.

Class in Pruning.

Course II, Small Fruit Culture—*First Term, Junior Year—Four periods per week.* Lectures and discussion on planting, cultivation and marketing of small fruits.

Course III, Floriculture and Landscape Gardening—Floriculture—*First Half, Second Term, Junior Year—Six periods per week.* Lectures and practical work. Management and care of greenhouses; plant propagation, heating and ventilation.

Landscape Gardening—*Second Half, Second Term, Junior Year—Six periods per week.* Lectures and demonstrations. Special attention is given to rural ornamentation, together with a brief study of ornamental trees and shrubs.

Course IV, Olericulture or Vegetable Gardening — *Third Term, Junior Year—Six periods per week.* Lectures; a discussion of the principles of vegetable gardening, packing and marketing.

Class in Gardening.

Course V, Pomology — *First Term, Senior Year—Two periods per week.* Text-book and lectures. A discussion of the principles underlying the growing of orchard fruits. Selection of location for the orchard, orchard management, handling and marketing of the fruit.

Course VI, Forestry—*Second Term, Senior Year—Two periods per week.* Lectures. Discussion of the general principles of forestry. The effect of forest upon soil and climate. A brief study of forest trees and silvicultural methods.

Course VII, Plant Breeding and Plant Evolution—*Third Term, Senior Year—Two periods per week.* Lectures. The principles of plant breeding, plant variation; the effect of soil, climate, cultivation and other ameliorating influences upon plants. The crossing and hybridizing of plants. Heredity, selection and origin of domestic varieties. A brief history of plant evolution.

Course VIII, Special Research Work—*Three Terms, Senior Year.* Time and work to be arranged with each student individually. The course will be given only to Seniors, and must be preceded by Courses I to IV. It may be taken by Seniors as their major subject, or as one of their minors.

Department of Veterinary Science.

SAMUEL S. BUCKLEY, Professor.

Course I, Microscopy—*First Term, Sophomore Year—For students in general science course—Six periods per week.* Lectures and laboratory exercises. The study of simple, compound and dissecting microscopes. Laboratory methods and microscopical technique. This course is designed to equip students for the more technical work in advanced courses.

Course II, Bacteriology—*Second Term, Sophomore Year—For students in general science course—Eight periods per week.* Lectures and laboratory exercises. Five periods per week for students in the regular agricultural course. The study of bacteria, methods of propagation. Culture media, mounting and staining specimens. Infection, disinfection, sterilization, pasteurization, etc.

A Post Mortem.

Course III, Bacteriology—*Third Term, Sophomore Year—For students in general science and regular agricultural courses—Five periods per week.* Lectures and laboratory exercises. Completion of course in bacteriology as outlined in Course II.

Course IV, Comparative Anatomy and Physiology—*Second Term, Junior Year—For students in general science and regular agricultural courses—Six periods per week.* Lectures and laboratory exercises. The comparative anatomy and physiology of the domesticated animals with special reference to the processes of nutrition.

Course V—*Third Term, Junior Year—For students in general science and regular agricultural courses—Eight periods per week.* Lectures and laboratory exercises. A study of conformation of animals and locomotion.

Course VI, Veterinary Science—*Senior Year.* For students of the agricultural course this is a required study throughout the year. It embraces nursing, emergency treatment, administration of medicines, means of restraint, the common diseases, and general care and management of the domesticated animals.

Short Courses.—Students in the Short Winter Course in Agriculture are required to attend the twenty lectures given on veterinary subjects and to examine patients in the stables. Students of the two-year agricultural course receive during the first year one lecture and four practical periods per week for the first term; two lectures and six practical periods per week for the second term. During the second year they receive two lectures and four practical periods per week for the three terms. The character of the work is such as to enable a stock owner to care for animals in health and disease in an intelligent manner, to appreciate symptoms of disease, and so treat the commoner disorders and diseases of the domesticated animals.

Class in Veterinary Science.

Department of Entomology and Zoology.

T. B. Symons, Associate Professor.
R. I. Smith, Assistant.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed, with a view of giving the students as broad a knowledge of the subject as practicable in the time devoted to it. In the laboratory, attention is given to methods of investigation, insect anatomy, and preparation and classification of collections made in the field. The work of this department is open only to Juniors and Seniors in the Agricultural, Chemical and General Science Courses, unless by special arrangement.

Course I, Zoology—*First and Second Terms, Junior Year—Six periods per week; lectures and laboratory exercises.* This course involves a study of representatives of the principal groups of animals, together with lectures on their structure and classification.

Course II, Entomology—*Third Term, Junior Year—General Course—Eight periods per week.* Lectures and laboratory exercises. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders, and the more important families; the habits and life history of insects, with special reference to those species that are of economic importance. The laboratory and field work includes the study of the more general features of insect anatomy, the determination of general species, and the collection and preservation of insects.

Course III, Entomology—*Senior Year.* Advanced course. Open only to students who have completed Courses I and II or their equivalents. This course consists of special work in morphology or classification, or working out the life history of insects. Students making entomology their major will be required to devote at least ten hours per week, throughout the year, to this course, and prepare an original thesis upon the subject chosen or assigned.

Class in Entomology.

Department of Botany and Vegetable Pathology.

J. B. S. Norton, Professor.
Frederick H. Blodgett, Assistant.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture, for since plants in the field and garden are the subjects dealt with, the study of plant life must be one of the fundamental sciences on which such work is based. No course can be taken unless those preceding it or their equivalent have been pursued.

The equipment and means of illustration and demonstration consist of a reference library, containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants, microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Course I, Elementary Botany—*Third Term, Freshman Year—Two theoretical and four practical periods per week.* Laboratory and field work, with supplementary reading, using principally Leavitt's "Outlines of Botany," or Bergen's "Foundations of Botany," and taking up the fundamental facts regarding structure and elementary physiology of the common plants with a systematic study of the spring flora. Each student begins a collection of plant specimens to illustrate a subject in which he is specially interested.

Field Class in Botany.

Course II, Ecology—*First Term, Sophomore Year—Two theoretical and two practical periods per week.* The work of Course I is continued with the wild and cultivated fall plants, and special attention given to the associations of plants and their relations to environment, light, water, soil, etc. In connection with this work the reproductive organs of plants and their work is studied. Suitable literature for reading is used to supplement the field and laboratory exercises.

Course III, Morphology and Life Histories of Plants—*First Term, Junior Year—Three theoretical and six practical periods per week in the Agricultural Course; four theoretical and eight practical in the Biological Course.* A comparative study of the structure and life histories of the principal types of plants from the lowest to the highest is pursued, special attention being given to those group of plants of particular economic interest. The structure, geographical distribution, classification and uses of the principal economic plants, including food plants, grasses, timber, fruits, weeds, poisonous plants, parasitic fungi, etc., is studied. The exercises consist of lectures and microscopic work in the laboratory.

Course IV, Plant Physiology—*First Term, Senior Year—Two lectures and a minimum of eight periods of experimental laboratory work* This course may be elected as a minor.

Course V, Plant Pathology—*Second Term, Senior Year—Two lectures and a minimum of eight periods of laboratory and field work per week.* This course embraces a study of the causes, symptoms and means of control of plant diseases. It may be elected as a minor following Course IV, or the two courses may be pursued together.

Course VI, Original Research—*Third Term, Senior Year.* The students time during this term is spent in completing a thesis on some botanical subject on which he has done original work during the year.

Courses in Dendrology, Economic Plant Histology, Special Systematic work or studies relating to Plant Breeding, may be arranged for those who wish, to take the places of Courses IV and V.

Senior students electing botany as a major study must have had courses one to four inclusive, or their equivalents. An outline of the work and hours will be arranged upon consultation with the professor in charge.

Advanced Work.—Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalents. This work is designed for students who wish to specialize in Botany or in Plant Pathology. An outline of the courses and subjects for original investigation will be arranged upon consultation with the professor in charge. Students specializing in the above courses may often gain further knowledge by assisting in the work of the department. Special attention is given to students wishing practice in the treatment of plant diseases.

Department of Languages.

THOMAS H. SPENCE, Professor.

R. W. B. MAYO, Assistant.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German; only students of the Classical Course are required to take Latin. Students in the General Science Course may elect to take Latin throughout the Freshman year in place of agriculture.

The course of study in Latin is given with two ends in view—first, to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of selections from Sallust, Vergil, Cicero, Horace, Cæsar, Ovid, Livy, Juvenal, Tacitus and Terence.

On account of the large percentage of Germans in our population, a speaking knowledge of this language is very important, and especial attention is given to conversation. After the elements of the language have been mastered, and a certain facility of translation acquired, the class is divided, and the students pursuing the Classical Course continue to translate from the works of classic German authors, while the students of the Scientific Courses are given scientific German for translation.

In French, also, after the elementary work and grammar have been completed, the students of the Classical Course, and those of the other courses are separated, the former translating selections from French literature, while to the latter are assigned books and periodicals of a scientific nature for translation.

Latin Courses.

Course I, Grammar and Composition—*First Term, Freshman Year—Six periods per week.* Text-books, Collar and Daniell's "First-Year Latin." Lectures on syntax.

Course II, Grammar and Composition—*Second Term, Freshman Year—Six periods per week.* Conclusion of Course I.

Course III, Translation and Composition—*Third Term, Freshman Year—Six periods per week.* Translation of easy Latin selected from Viri Romae, Nepos, Sallust and Cæsar. Latin Prose Composition based on texts read.

Course IV, Translation and Composition—*First Term, Sophomore Year—Six periods per week.* Text-books, Harper and Tolman's "Cæsar." Chase and Stuart's "Sallust." Latin Prose Composition based on text read.

Course V, Translation, Composition, Mythology, Prosody—*Second Term, Sophomore Year—Six periods per week.* Text-books, Harper and Miller's "Virgil," Gayley's "Classic Myths;" Allen and Greenough's "Latin Grammar." Latin Prose Composition based on text read. Lectures on Ancient Geography, etc.

Course VI, Translation, Composition, Mythology—*Third Term, Sophomore Year—Six periods per week.* Conclusion of Course V.

Course VII, Translation and Composition—*First Term, Junior Year—Six periods per week.* Text-books, Allen and Greenough's "Cicero," Daniell's "Latin Prose Composition."

Course VIII, Translation and Prosody—*Second Term, Junior Year—Six periods per week.* Text-book, McLeane's "Horace."

Course IX, Translation and Composition—*Third Term, Junior Year—Six periods per week.* Text-book, Chase and Stuart's "Tacitus." Latin Prose Composition based on text read.

Course X, Translation and Composition—*First Term, Senior Year—Six periods per week.* Text-book, Chase and Stuart's "Livy." Latin Prose Composition based on text read.

Course XI, Translation—*Second Term, Senior Year—Six periods per week.* Text-book, West's "Terence." Lectures on Latin Drama.

Course XII, Translation—*Third Term, Senior Year—Six periods per week.* Text-book, MacLeane's "Juvenal." In this course an essay on "Roman Morals" or some like subject written in Latin is a part of the required work.

German Courses.

Course I, Grammar and Conversation—*Third Term, Sophomore Year—Six periods per week.* Text-book, Otis' "Elementary German."

Course II, Translation — *First Term, Junior Year—Three periods per week.* Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrop's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Course III, Translation—*Second Term, Junior Year—Three periods per week.* Continuation of Course II.

Course IV, Translation—*Third Term, Junior Year—Three periods per week.* Conclusion of Course III.

Course V, Translation of Scientific German—*First Term, Senior Year—Four periods per week.* Selected readings from various texts and periodicals.

Course VI, Translation of Scientific German—*Second Term, Senior Year—Four periods per week.* Conclusion of Course V.

French Courses.

Course I, Grammar and Composition—*First Term, Senior Year—Five periods per week.* Text-book, Whitney's French Grammar.

Course II, Translation—*Second Term, Senior Year—Five periods per week.* Text-books, Super's French Reader, Rougemont's "La

France," Fenelon's "Telmaque," Herdler's "Scientific French Reader," Dumas' "Les Trois Mousquetaires," and others; also French periodicals.

Course III, Translation—*Third Term, Senior Year—Five periods per week.* Conclusion of Course II.

Preparatory Department.

HENRY T. HARRISON, Principal.
CHARLES S. RICHARDSON, Assistant.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students,

Course I, Arithmetic—*First and Second Terms—Ten periods per week.* Wentworth's Grammar School Arithmetic, completed.

Course II, Arithmetic—*Third Term—Five periods per week.* Advanced work.

Course III, Algebra—*Three Terms—Five periods per week.* Wentworth's Algebra, as far as quadratics.

Course IV, History—*Three Terms—Five periods per week.* United States History, completed.

Course V, Geography—*First Term—Five periods per week.* Descriptive Geography, completed.

Course VI, Geography—*Second and Third Terms—Five periods per week.* Maury's Physical Geography, completed.

Course VII, English—*Three Terms—Eight periods per week.* Spelling, technical grammar, parsing and analysis, composition, letter-writing and elocution.

Military Department.

Ezra B. Fuller, Major 7th Cavalry, U. S. A.,
Commandant of Cadets.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion" (in close and extended order), the "School of Cannoneer" and out-post duty. The study of tactics and lectures on military science and tactics, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution in the true sense of the word. It teaches a system of organization that governs mankind.

Discipline.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be truthful under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the key-note of student government. Failure in duty means, necessarily, forfeiture of confidence and trust.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses the punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If one hundred demerits be given to any student during any one term, marked deficiency in conduct is apparent and his parents or guardian must at once remove him from college.

A cadet manifesting an indifference to the observance of the rules and regulations of the institution or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so, his parents, upon notice given by the President, must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examination, is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that a failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone messages, unless the latter are very urgent.

Three reports are sent to each parent during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

Promotions.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldiery bearing, observance of the rules of the College and scholastic attainments. These are valued in the order named—forty per cent., thirty per cent., thirty per cent. Perfect would be one hundred. Below seventy per cent. deficient, and hence not considered for promotion. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded written reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior class; sergeants from the Junior class, and corporals from the Sophomore class. No exception will be made to this order, unless it be that the number of men in any one class is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

Uniform.

The cadet uniform, of substantial cadet-grey cloth, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. The cost of the entire outfit—coat, trousers and cap—is $16.00. Parties coming through Baltimore can leave measures and orders with the New York Clothing House, 102-104 East Baltimore street. *Payment must be made for this at time of entrance. This is imperative; the firm requires it.*

Daily Trumpet Calls.

First Call for Reveille	6.30	A.M.
Reveille	6.35	A.M.
Assembly, Roll Call	6.40	A.M.
Breakfast	6.55	A.M.
Assembly, Roll Call	7.00	A.M.
Chapel	7.25	A.M.
Sick Call	7.40	A.M.
Recitation	7.55	A.M.
Drill	11.10	A.M.
Assembly, Roll Call	11.15	A.M.
Recall	11.45	A.M.
Guard Mounting	11.50	A.M.
Assembly, Roll Call	11.55	A.M.
Adjutant's Call	12.00	M.
Dinner	12.15	P.M.
Assembly, Roll Call	12.20	P.M.
Recitations	12.55	P.M.
Supper	5.55	P.M.
Assembly, Roll Call	6.00	P.M.
Retreat	7.20	P.M.
Assembly, Roll Call	7.30	P.M.
Tattoo	10.00	P.M.
Tapps......Lights Out	11.00	P.M.

Department of Public Speaking.

Charles S. Richardson, Professor.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

Course I—*First Term, Freshman Year—One period per week.* Articulation, accent, modulation, force and re-articulate pause; expressive management of the body, attitude, and motion. Selections of poetry and prose are read and declaimed by students.

Course II—*Second Term, Freshman Year—Two periods per week.* Simple lectures on orators and oratory. Methods of analysis and subjects for oration. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Course III—*First Term, Sophomore Year—One period per week.* A review of all work of Freshman Classes. More advanced selections for declamation (Shakespeare, Macauley, Webster, etc.) Lectures on ancient and modern orators, with readings and declamations by students from orations.

Course IV—*Second Term, Sophomore Year—Two periods per week.* Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day (tariff, currency, territorial expansion, trades unions, trusts, Isthmian Canal, etc.) Lectures on parliamentary law.

Department of Physical Culture.

Charles S. Richardson, Director.

The physical culture of the students is provided for by a regular course of instruction in the gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years. Three periods per week, Preparatory, Freshman and Sophomore years.

One of the most valuable features of this department is a complete anthropometry outfit by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

The College Library.

E. T. Harrison, Librarian.

The College library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound government reports form an important addition to the reference works of the library. Many of the leading magazines and a large number of newspapers are subscribed for.

Donations to Library.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey; Weather Service and Highway Commission; Department of Agriculture, Washington, D. C.; and the County Press for valuable additions of their publications.

Courses of Study.

In order to systematize the work of the numerous departments of the College, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, four distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering, Scientific and Classical. In three of these, the Agricultural, Mechanical Engineering and Classical, a continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the class-work is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular study desired—agricultural, mechanical or the classical branches, is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientific agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical, general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for those who have neither time nor the opportunity to take the regular four years' course. In fact, it is really designed for those actually engaged in farming, and who can spare a few weeks during the winter to attend lectures, and to follow the practical work of the College and Station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry, chemistry, horticulture, entomology, plant physiology and pathology, farm accounts, road construction, carpentry, blacksmithing, pipe fitting, veterinary science, the principles of citizenship and the elements of business law. The entire expense, including board, need not be over fifty dollars ($50). The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of the Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering. The course leads to the degree of Mechanical Engineer.

The Classical Course was instituted to meet a demand on the part of the patrons of the College for a course of study which should prepare young men to enter the so-called learned professions. The course emphasizes the modern languages, Latin, mythology, English, civics and pyschology, with a moderate amount of mathematics and the natural and physical sciences. The degree of Bachelor of Arts is conferred upon its graduates.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science—chemistry, biology, botany, vegetable pathology, entomology, veterinary science, physics, civil engineering or political science. The basis of the course is a thorough training in mathematics, English and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Junior year. In the Senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups and studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

Requirements for Degrees.

As a requisite for graduation, the candidate for a degree must, in addition to satisfactorily completing the work previously outlined, submit a thesis which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon college graduates of not less than two years' standing, who have resided at this College for two years, and have completed the equivalent of the above course of study.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

Outline of Courses.

The following tables will serve to illustrate in a succinct manner the subjects offered in each item of every session, with the number of periods allotted to each. The subjects for the Senior year are not tabulated for the Agricultural and General Science Courses, as they are mostly elective. Numerals in parenthesis indicate practical work. Two periods of practical work is regarded as equivalent to one period of recitative work, the College day being divided into eight periods of recitative or class work of forty-five minutes each.

Freshman Year.

FIRST TERM. September 17—December 22.	Agricultural.	General Science.	Mechanical.	Classical.
Algebra	5	5	5	5
Arithmetic	3	3	3	3
English	5	5	5	5
Public Speaking	1	1	1	1
Physical Culture	(3)	(3)	(3)	(3)
Geology	4	4		
Drawing			(6)	(6)
Agriculture	4 (4)	4 *(4)		
Latin		5 (1)		5 (1)
History				2
Technical Instruction			5	
Woodwork			(6)	
SECOND TERM. January 5—March 30.				
Algebra	5	5	5	5
Plane Geometry	3	3	3	3
English	5	5	5	5
Public Speaking	2	2	2	2
Physical Culture	(5)			
Geology	5	5		
Drawing			(6)	
Latin		5 *(1)		5 (1)
History				5
Woodwork	(6)		(6)	
THIRD TERM. April 5—June 10.				
Algebra	3	3	3	3
Plane Geometry	5	5	5	5
English	5	5	5	5
Drawing	(6)	(6)	(6)	
Agriculture	4 (4)	4 *(4)		
Latin		5 *(1)		5 (1)
History				5
Botany	2 (4)	2 (4)		
Woodwork			(6)	

*Students taking the General Science Course may elect Latin or Agriculture.

NOTE.—Numerals in parenthesis indicate periods of practical work.

Sophomore Year.

FIRST TERM. September 17—December 22.	Agricultural.	General Science.	Mechanical.	Classical.
Mathematics	4	4	4	4
Rhetoric	4	4	4	4
Physics	2	2	2	2
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Public Speaking	1	1	1	1
Botany	3 (2)	2 (2)		
Forging or Foundry	(6)		(6)	
Agriculture	3 (2)			
Microscopy		2 (4)		
Drawing			(6)	
History				4
Latin				5 (1)
Theoretical Mechanics			4	
SECOND TERM. January 5—March 30.				
Mathematics	4	4	4	4
Rhetoric	4	4	4	4
Physics	2	2	2	2
Chemistry	4 (4)	4 (4)	4 (4)	4 (4)
Public Speaking	2	2	2	2
Bacteriology	1 (4)	2 *(6)		
Descriptive Geometry		*3	3	
Forging or Foundry			(6)	
Drawing			(4)	
History				4
Latin				5 (1)
Agriculture	3 (4)			
THIRD TERM. April 5—June 10.				
Mathematics	4	4	4	4
Logic		3	3	3
German	5 (1)	5 (1)	5 (1)	5 (1)
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Bacteriology	1 (4)	1 *(4)		
Descriptive Geometry		*2	2	
Forging or Foundry			(6)	
Drawing			1 (4)	
Latin				5 (1)
Agriculture	3 (2)			
Horticulture	3 (4)	3 (4)		

*Students who intend to pursue the Physical Course in the Junior Year shall substitute Descriptive Geometry for Bacteriology.

NOTE.—Numerals in parenthesis indicate periods of practical work.

Junior Year.

FIRST TERM. September 17—December 22.	Agricultural.	General Science.			Mechanical.	Classical.
		Biological.	Chemical.	Physical.		
German	3	3	3	3	3	3
Physics	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 *(3)	....	2 (3)
Chemistry	....	....	4 (12)	4 *(4)	....	....
Drawing	....	....	....	*(4)	2 (4)	....
Zoology	2 (4)	2 (4)	2 (4)	....	....	....
Botany	3 (6)	4 (8)	.....	....	....	....
Agriculture	†3 (4)	....	....	....	....	....
Constitution	....	....	....	....	....	5
Latin	....	....	....	....	....	6
Horticulture	2 (2)	....	....	....	....	....
English	1	1	1	1	1	6
Analytical Geometry	....	....	....	5	5	....
Machine Work	....	....	....	....	(6)	....
Theory of Steam Engine	....	....	....	....	4	....
SECOND TERM. January 5—March 30.						
German	3	3	3	3	3	3
Physics	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 *(3)	....	2 (3)
Chemistry	....	....	4 (12)	4 *(4)	....	....
Drawing	....	....	....	*(4)	2 (4)	....
Zoology	2 (4)	2 (4)	2 (4)	....	....	....
Agriculture	†2 (2)	....	....	....	....	....
Civics	....	3	3	3	3	3
Latin	....	....	....	....	....	6
Horticulture	3 (3)	....	....	....	....	....
English	1	1	1	1	1	6
Differential Calculus	....	....	....	5	5	....
Physiology and Anatomy	2 (4)	2 (4)	....	....	....	....
Machine Work	....	....	....	....	(6)	....
THIRD TERM. April 5—June 10.						
German	3	3	3	3	3	3
Physics	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 *(3)	....	2 (3)
Chemistry	....	....	4 (12)	4 *(4)	....	....
Drawing	....	....	....	*4	2 (4)	....
Civics	....	3	3	3	3	3
Latin	....	....	....	....	....	6
Horticulture	3 (3)	....	....	....	....	....
English	1	1	1	1	1	6
Integral Calculus	....	....	....	5	5	....
Physiology and Anatomy	2 (6)	2 (6)	....	....	....	....
Machine Work	....	....	....	....	(6)	....
Entomology	2 (6)	2 (6)	....	....	....	....

*Students in Physical Course may elect Chemistry 4 (4) throughout the year, or Drawing (4) and Surveying 2 (3) throughout the year.

†Students in Agricultural Course may substitute Horticulture, Chemistry or Biology for a number of periods equivalent to that assigned to Agriculture.

NOTE.—Numerals in parenthesis indicate periods of practical work.

Senior Year.

FIRST TERM. September 17—December 22.	Mechanical.	Classical.
German	4	
Graphic Statics	4	
Power Plants	2	
Machine Design	2 (2)	
Machine Work	8	
Latin		6
French		5
English		4
Literary Criticism		3
Business Law		3
SECOND TERM. January 5—March 30.		
German	4	
Strength of Materials	4	
Machine Design	2 (4)	
Machine Work	(10)	
Economics	4	4
Latin		6
French		5
English		4
Psychology		4
THIRD TERM. April 5—June 10.		
Machine Design	2 (2)	
Machine Work	(10)	
Testing	(6)	
Economics	4	4
Latin		6
French		5
English		4
Psychology		4

NOTE.—Numerals in parenthesis indicate periods of practical work.

The work for the Senior year in Agriculture* and General Science shall consist of a major subject, and two or more minor subjects. This work will be elective upon consultation with the Professor in charge of the major subject.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) points recitative work, at least ten (10) points of which shall be devoted to the major subject, and ten (10) to the minor subject.

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*Veterinary Science is a required subject in the Senior Year for students of the Agricultural Course.

Two Years' Course in Agriculture.

FIRST YEAR.

FIRST TERM.		SECOND TERM.		THIRD TERM.	
Agriculture............	7 (6)	Agriculture............	3 (4)	Agriculture............	7 (6)
Chemistry	4 (3)	Chemistry	4 (4)	Chemistry	4 (3)
Wood Work...........	(6)	Horticulture..........	4 (4)	Botany	2 (4)
Arithmetic............	5	Blacksmithing........	(6)	Veterinary Science.	1 (4)
		Veterinary Science.	2 (4)		

SECOND YEAR.

FIRST TERM.		SECOND TERM.		THIRD TERM.	
Agriculture............	6 (6)	Agriculture............	5 (6)	Agriculture	2 (2)
Horticulture..........	2 (4)	Horticulture..........	3 (3)	Horticulture	3 (3)
Veterinary Science.	2 (6)	Veterinary Science.	2 (6)	Veterinary Science.	2 (6)
Botany	3 (6)	Entomology	2 (4)	Entomology	2 (6)
		Dairying	1 (4)	Stock Feeding.	4 (4)

Short Winter Course in Agriculture—Commencing January 6, 1904.

A ten weeks' course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competion of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four years' course. This solves the problem for them.

Outline of the Course.

The work of the course consists of lectures and practical exercises in the laboratories, shops, greenhouses, barns and creamery. The subjects handled and the allotment of hours are as follows: Farm crops and cultivation of the soil, 10; plant production, 10; farm live

stock, 20; tobacco, 6; stock feeding, 9; agricultural chemistry, 10; manures, 10; farm accounts, 12; dairying, 40; veterinary science, 20; carpentry, blacksmithing and pipe fitting, 50; plant physiology and pathology, 15; economic entomology, 20; horticulture, 30; road construction, 5; principles of citizenship, 10.

No Expense for Tuition, Use of Laboratories or Supplies.

Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College for $4.00 per week.

Apprenticeships in Agriculture.

The Agricultural Experiment Station, instead of having all the work in the dairy and horticultural divisions performed by regularly paid laborers, has some performed by apprentices. The apprenticeships in these divisions have been established with five objects in view, viz.: 1st.—In order to offer to young men who have a good common school education, and who have not the means for taking either a regular college course, or even a short course, an opportunity to become trained and skilled laborers in the dairy or some class of horticultural work. 2nd.—In order to enable young farmers to take up and engage in some of the specialties in farming on their own farms in an intelligent manner. 3rd.—In order to supply some of the numerous applications that come to the College and Station for skilled help of the character indicated. 4th.—In order to give the College and Station a nucleus for the extension of their work and a more appreciative constituency. 5th.—In order to have some of our labor performed by persons who have more interest in what they are doing than the money they are to receive.

These apprenticeships are open to farmers' sons on the following terms: The Station will board and room the apprentice or pay the equivalent in money as preferred. The Station will furnish the instruction and facilities for instruction given in the several branches pertaining to the specialty taken up.

Those serving a dairy apprenticeship will be expected to devote from three to five hours of each day in receiving class-room instruction, and in study, besides the time devoted to practice in the skilled operations. It is expected that apprentices shall become thoroughly familiar with the scientific feeding of dairy stock, and with all the modern practices pertaining to dairy and creamery management. The plan pursued is to divide the work which would ordinarily be performed by one laborer among three apprentices. A dairy apprentice is expected to stay at the Station for six months.

The horticultural apprentice is to serve for one year on the same terms as the dairy apprentice. The instruction taken in this division will be given at the same time, and with short course students of the College. The horticultural apprentice will be expected to take part in all classes of the work of this division, but he may specialize, so as to become specially skilled in either large fruits, small fruits, truck crops, floriculture, nursery management, greenhouse management or spraying. The apprentices shall have access to the libraries and reading-rooms of the Station at all hours.

The Station can accommodate but a limited number of apprentices, and vacancies will be filled in the order in which applications for the same are received.

After an apprentice has served his time, should a position be desired by him, we will take pleasure in recommending him to a place whenever we have a request for skilled help in that particular line, provided that such apprentice has proven himself worthy. So far we have had more applications for skilled help on farms and in creameries than we have been able to supply. Make applications and requests for further information to

H. J. PATTERSON, Director of the
Maryland Agricultural Experiment Station,
College Park, Md.

General Information.

Requirements for Admission.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 15th and 16th, 1903. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic (complete), algebra (as far as quadratics), political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic (as far as percentage), United States history and political geography.

Every applicant for admission to the College must bring satisfactory testimonials as to character and previous scholarship, from one or more persons qualified so to speak—his former teacher, pastor or neighbor, acquainted with his general reputation. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly-acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency.

Applicants having completed the eight grades of the grammar school course upon presentation of a certified copy of the final report showing record of work completed and certificate of satisfactory deportment from the teacher in charge, may be admitted on trial to the Freshman Class without further examination. It must be understood that such assignment is made conditional upon the applicant's demonstrating his fitness to bear the responsibilities assumed. Promotions and reductions will be made in six weeks after the resumption of the regular exercises, as the individual cases may require.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present certificates from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and woodwork.

Examinations and Promotions.

In order to pass from one class to the next higher class a student is required to pass the yearly examination by a mark of at least sixty per cent. in each study, and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year.

*However, no student in the Mechanical Course will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

It has been found necessary to make some regulations to provide for cases of using unfair means in examinations. The Faculty, therefore, has agreed upon the following rules, which will be rigidly adhered to:

I.—"Any student detected in so doing will be required to surrender his papers, and will not under any circumstances be given another examination in that particular study."

II.—"Any student detected in so doing will not, under any circumstances, be allowed to receive a commission as a cadet officer."

III.—"Assignment to course can only be made upon direction of parent, either by letter or verbally. Change of course is not encouraged, except in cases of apparent necessity."

Scholarships.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County Examiner. All scholarship students must be prepared for entrance to the Freshman class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present them-"selves at the College, or other designated place, at the date which "may be named, in the September or January next following the "award, and be examined by College authorities for entrance to the "Freshman class. Alternates are to be thus examined, as well as prin-"cipals, and in case of a failure of the principal to secure or hold the "scholarship, the alternate will have the first right to the place, if "within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to se-"cure the same, pass the entrance examination of the College, and (if

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*This regulation will go into effect June, 1904.

"entering in January) such other examination as may be required to "join *the Freshman Class. Every one must declare his intention of "completing the prescribed course of study of the College, in either Agri- "culture or Mechanical Engineering, provided he retains his Scholar- "ship, and must make an advance payment of $15 on the year's account. "And to hold a scholarship, the student must make the subsequent pay- "ments and meet such requirements of the College as to scholarship and "deportment, as may be prescribed by the President and faculty. By "passing special examinations, candidates for scholarship may be per- "mitted to enter the Sophomore class, or by presenting satisfactory "certificates."*

Experiment Station Scholarships and Fellowships.

In order to further investigations relating to agriculture or horticulture, the Experiment Station has arranged to offer scholarships not exceeding one hundred dollars in amount to students pursuing such investigations. Those competing for scholarships shall commence their investigations not later than the second term of the Junior year, the awards of scholarship to be paid on satisfactory completion of the Senior year's work. The amount of such scholarships shall be determined from time to time and depend upon the character of the work in hand.

When investigations begun under scholarships are not completed, or where further work is deemed advisable, fellowships have been established to be awarded for such time and amount as may be deemed necessary for the completion of the work, but will not exceed three hundred dollars per year. Further information may be obtained from the Director of the Experiment Station.

Student Expenses.

The expenses of the college year for the several classes of students are as follows. No reductions are made for regular vacations. It will be noted below that no charge will be made for tuition or books.

Regular Students.

Board, heat, light and room	$150 00
*Laboratory fee	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$165 00

Scholarship Students.

Board, heat, light and room	$ 70 00
*Laboratory fee	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$ 85 00

Day Students.

Room and heat	$ 24 00
*Laboratory fee	6 00
Breakage fee	5 00
Total cost	$ 35 00

Students entering College after November 1st in each year or leaving before the end of school, except when dismissed or because of illness, will be charged as follows :

Boarders at rate of	$18 00	per month.
Scholarship students	10 00	" "
Day students	3 00	" "

Money will not be refunded in case of withdrawal, except the same be caused by ill health or dismissal by the President.

No allowance will be made for absence on account of illness of less than one month's duration, and then the rebate shall be at the rate of $14.00 per month for boarders, $7.00 per month for scholarship students and $2.00 per month for day students.

Table board is $12.00 per month; less than a month, 25 cents per meal.

Time of Payment.

For Regular Students:

$40.00 (and the fees) on entrance; $40.00 on November 15th; $40.00 on February 1st; $30.00 on April 1st.

For Scholarship Students:

$35.00 (and the fees) on entrance, and $35.00 on February 1st.

For Day Students:

$12.00 (and the fees) on entrance, and $12.00 on February 1st.

Promptness in Payment is Insisted Upon.

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*For students in Chemistry only.

†This covers only such attention as arises from ordinary sickness—cost of consultation and trained nurses extra.

Explanation of Fees.

The laboratory fee is intended to cover the cost of the materials and apparatus used by the student in practical laboratory work.

The physician's fee is to provide for the attendance of the regular College physician in all ordinary cases of sickness.

The breakage fee is to cover all losses to the College caused by careless breakage or other damage to property by the students. Each loss is divided proportionately among the students, and the unused balance of each fee refunded at the close of the year. In case the loss is known to be caused by any particular student, the whole amount is charged to his account.

Except in cases of extended illness, no money will be refunded for long-continued absence or enforced withdrawal from the College.

Students entering late in the session will be charged according to the date of entrance. No allowance will be made for less than one month.

Agreement for Matriculation.

It is understood that the President of the College, as the executive of the same, and acting for the Board of Trustees, a party to this contract, has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations hereinbefore set forth.

No student will be accepted as a matriculate until the contract card is signed by parent or guardian and received by the President of the College.

Articles Necessary to be Provided.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed).
3 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three-quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (shuck), cotton top (uniform).

The room-mates together purchase the following articles:—

1 set of lamp fixtures (uniform).
1 pitcher and basin (uniform).
2 tablecloths (uniform).
1 broom.
1 looking-glass.
1 slop-jar (porcelain).

All the articles marked uniform in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, *and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.*

Student Opportunities.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference. The compensation in all cases is fixed at ten cents per hour.

Letter from Department of Agriculture.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving a compensation which will enable them to pay all expenses. This offer on the part of the Department of Agriculture is greatly appreciated, and will, no doubt, be availed of by many attending the land-grant colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:—

Department of Agriculture, Washington D. C.,
June 27th, 1899.

"Dear Sir—In my annual report to the President for 1898, I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post-graduate studies in connection with work in the scientific division of this department, as far as practicable. In pursuance of this policy, I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as "Scientific Aids," on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support, in the preparation of their graduates for posts of usefulness in this department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope, therefore, that the effort which I am now making in this direction will be but a beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high-grade scientific work. It will, of course be understood that under present conditions the Department can only admit a very limited number of scientific aids. Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualifications for aiding in the work of the Department now in progress.

"In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission.

"Very respectfully,
"JAMES WILSON,
"Secretary Agriculture."

To R. W. Silvester, President, College Park, Md.

Scientific Aid, Department of Agriculture.

August 1st, 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of Scientific Aid, Department of Agriculture.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

	Subjects.	Weights.
1.	College Course with Bachelor's Degree	50
2.	Post-graduate Course and Special Qualifications	25
3.	Thesis or Other Literature	25
	Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commissioner prior to the hour of closing business, on August 1st, 1900, their statements and other material which will be required as specified in a special form which will be furnished them by the Commission, together with application blank (Form 304), in order to have their names entered upon the register, which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to Angust 1st, 1900, may file them at any subsequent time, when they will be rated, and the names of those attaining eligible averages will be entered upon the register.

For the information of applicants the following statement is made, as received from the Secretary of Agriculture:

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.
2. Each applicant must file with the United States Civil Service Commission, Washington, D. C., a properly certified statement as to the length of time spent in college, the studies pursued, the standing in these studies, the special work it is desired to take up, and the special qualifications for such work, and finally, a thesis upon such scientific subjects as the applicant may select, or in lieu of this, any literature on scientific subjects, over his own signature.
3. The length of time any scientific aid may serve in the Department is limited to two (2) years.
4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified, without regard to any consideration, save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blanks (Form 304) and special forms.

Student Organizations.

Student Clubs for religious, social, literary and athletic purposes are encouraged as a means of creating Class and College pride, and developing an *esprit de corps* among the students. Each class has its own organization, in which matters relating to class work are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline, and tends to raise the standard of student honor.*

Young Men's Christian Association.

G. Sturgis, President.	A. T. Schenck, Vice-President.
A. A. Parker, Secretary.	H. D. Williar, Treasurer.

Most encouraging work has been done by this organization during the past year, and much interest has been shown in both the private and public meetings.

Athletic Association.

E. P. Walls, President.	J. M. Matthews, Vice-President.
W. R. Mitchell, Secretary.	C. P. Page, Treasurer.

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*The accounts of all Treasurers of Student Organizations will be audited monthly by a committee of the Faculty, which committee shall consist of the Professors of Physics, Botany and Veterinary Science.

Literary Societies.

Officers of the "New Mercer" Literary Society.

P. L. Peach, President. C. P. Page, Vice-President.
J. M. Matthews, Sec'y and Treas. J. Tate, Sergeant-at-Arms.

Officers of "Morrill" Literary Society.

E. P. Walls, President. C. N. Bouic, Vice-President.
J. P. Collier, Sec'y and Treas. H. D. Watts, Sergeant-at-Arms.

These societies are invaluable adjuncts to College work. Through them a good knowledge of parliamentary law is gained, as well as a readiness of expression and activity in thought—qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law, and train them in the delivery of their orations and debates.

The Oratorical Association of Maryland Colleges.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges, in rotation, and a marked improvement is to be observed as a result of its organization.

Editorial Staff of Reveille, '03.

P. L. Peach, Editor-in-Chief.
J. P. Collier, } Associate Editors.
C. N. Bowie, }

Departmental.

Athletics, E. B. Dunbar. Literary, R. W. B. Mayo.
Humorous, E. P. Walls. Rossbourg Club, J. M. Matthews.
Class and Historical, R. W. B. Mayo.

Board of Managers.

C. P. Page, Business Manager.
E. F. Garner, } Associate Business Managers.
J. W. Cairnes, }

The "Reveille" is the College annual edited entirely by the Senior class; it is the successor of the "Cadet's Review." Seven editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard, both of originality and expression.

Rossbourg Club.

P. L. Peach, President. J. P. Collier, Vice-President.
J. M. Matthews, Treasurer.

The social man is a necessity—hence, this organization is encouraged and supported by the President and Faculty. The entertainments of the same have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

The Alumni Association.

The growth of the Alumni Association during the past year is a source of great satisfaction to the officers of the College, and of the Association. Through the efforts of its officers a banquet was held at the College in June, this year. Renewed interest was shown by the existing members of the Association, and the occasion was marked by a large increase in the membership, recruited largely from the older graduates of the College.

All indications point to a great advance in the growth of the organization, and now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. At its regular annual meeting in June, it was decided that the Association would continue its offer of medals for proficiency in three of the departments of College work. By restricting the competition for the medal to be awarded for the best paper on "Agricultural Science" to those students pursuing original research, it is intended and hoped, by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

It will be a source of gratification to the members of the Association to note the action of the Board of Trustees of the College with reference to the holding of scholarships in the College. Three years ago the Association passed a resolution looking to the restriction of the holders of the State scholarships to the Agricultural and Mechanical courses in the College. This was with the idea of carrying out more completely the ideas of the founders of the College in establishing a school for instruction in Agriculture and the Mechanic Arts. The Board of Trustees last year passed an order putting the restriction in full operation. It is along this and similar lines that the Association has a broad field provided in which to exert its efforts, and as it increases in strength it may be expected to make its influence felt for the advancement of the interest and welfare of the College. The officers of the Association for the ensuing year are: President, J. Enos Ray, '92; Vice-President, S. S. Buckley, '93; Secretary-Treasurer, H. N. Lansdale, '02; Executive Committee, members-at-large, F. B. Bomberger, '94, and N. H. Gill, '97.

Graduates and members of the Association are requested to keep the Secretary-Treasurer, H. N. Lansdale, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates, which will enable the officers to locate and communicate with them, will facilitate their efforts and will tend to further the success of the Association.

Degrees and Medals.

Medals Awarded—Commencement, 1903.

SENIOR MEDAL.

Highest Standing for Four Years....................Robert W. B. Mayo.
Awarded by the President. Average for four years, 95.3.

JUNIOR MEDAL.

Highest Standing for Junior Year..................Harold W. Burnside.
Awarded by the President. Average for Junior Year, 91.0.

GOLD MEDAL.

For Best Debater in Competitive Debate............. .Preston L. Peach.
Awarded by the Alumni Association.

GOLD MEDAL.

For Proficiency in Mechanical Engineering.......Manuel A. Calderon.
Awarded by the Alumni Association.

GOLD MEDAL.

For Best Essay on Agricultural Science.................Edgar P. Walls.
Awarded by the Alumni Association.

GOLD MEDAL.

For Best Essay on "American Citizenship".......J. Marsh Matthews.
Awarded by the Board of Trustees.

Degrees Conferred 1903, with Subjects of Theses.

George Wilson Cairnes, M.E.........................Harford County, Md.
"Construction and Use of the Steam Engine Indicator."

Manuel Alvarez Calderon, M.E...Peru.
"Cultivation for Sugar Cane."

John Pouder Collier, M.E....................... ....Howard County, Md.
"Boiler Testing."

Emmons Burdette Dunbar, B.S.................... ....New York.
"Apple Orchard Management."

Enoch Francis Garner, M.E............. .Prince George's County, Md.
"Hardening and Tempering Steel."

H. H. Holzapfel, B.S............................Washington County, Md.
"Use of Fertilizers in Greenhouses."

Joshua Marsh Matthews, B.S.......................Baltimore County, Md.
"Storage of Food in Plants."

Robert Bainbridge Mayo, A.B..............Prince George's County, Md.
"The History of the Development of Philosophy."

Preston Littlepage Peach, M.E...........Prince George's County, Md.
"Boiler Testing."

Edgar Perkins Walls, B.S.......................Queen Anne County, Md.
"The Leguminous Plants of Maryland, in Relation to Soil Fertility."

Edwin Trundle Dickerson, (A.B., '98,) A.M............Baltimore, Md.
(1) "Currency," (2) "Development of the Jews."

Certificates Awarded.

Charles Norman Bouic...........................Montgomery County, Md.
For Completing Certain Classical Courses.

D. E. Brown.................................Prince George's County, Md.
T. A. P. Deaner.................................Washington County, Md.
For Completing the Two-Year's Course in Agriculture.

Military Department Roster.

Ezra B. Fuller, Major 7th U. S. Cavalry, Commandant of Cadets.

Cadet Battalion.

Field and Staff.

H. D. Watts..Major.
T. B. Mullendore.....................Lieutenant and Battalion Adjutant.
E. R. Sasscer.........................First Lieutenant and Quartermaster.

Non-Commissioned Staff.

J. N. Mackall...Sergeant-Major.
W. T. Smith ....Color Sergeant.
C. S. Ridgeway..............Chief Trumpeter (without military rank).

Company "A."

Walter Mitchell	Captain.
J. A. Anderson	First Lieutenant.
E. W. Merryman	Second Lieutenant.
——— ———	Third Lieutenant.
J. C. Cockey	First Sergeant.
J. H. Gassoway	Second Sergeant.
G. Sturgis	Third Sergeant.
E. H. Snaveley	Fourth Sergeant.
B. S. Dorsey	First Corporal.
H. J. Caul	Second Corporal.
B. H. Storm	Third Corporal.
John Tate	Fourth Corporal.
G. M. Mayer	Fifth Corporal.
H. L. Thompson and J. Salenas	Musicians.

Company "B."

R. P. Choate	Captain.
G. L. Wentworth	First Lieutenant.
S. P. Gray	Second Lieutenant.
——— ———	Third Lieutenant.
T. L. Hines	First Sergeant.
R. Naylor.	Second Sergeant.
C. P. Whiteford	Third Sergeant.
J. W. P. Somerville	Fourth Sergeant.
R. V. L. Wright	First Corporal.
J. J. T. Graham	Second Corporal.
L. Bassett	Third Corporal.
F. Zerkel	Fourth Corporal.
C. L. Lippencott	Fifth Corporal.
D. B. Galt and F. G. Galt	Musicians.

Company "C."

C. W. Cruikshank	Captain.
E. W. Stoll	First Lieutenant.
S. B. Shaw	Second Lieutenant.
——— ———	Third Lieutenant.
W. P. Roberts	First Sergeant.
M. White	Second Sergeant.
A. A. Parker	Third Sergeant.
E. D. Digges	Fourth Sergeant.
J. J. Carlin	First Corporal.
H. Williar	Second Corporal.
R. D. Nichols	Third Corporal.
J. J. A. Krentzlen	Fourth Corporal.
D. M. Shaffer	Fifth Corporal.
H. T. Rincke and C. C. Vrooman	Musicians.

Artillery.

H. Burnside	Second Lieutenant.
E. C. Mayo	Second Lieutenant.

Roster of Students.

Session 1902–1903.

Senior Class.

Bradford, H. K	Washington, D. C.
Cairnes, G. W	Jarrettsville, Md.
Calderon, M. A	Lima, Peru.
Collier, J. P	Ellicott City, Md.
Dunbar, E. B	Springville, N. Y.
Garner, E. T	Duley, Md.
Matthews, J. M	Dulaney's Valley, Md.
Mayo, R. W. B	Hyattsville, Md.
Page, C. P	Frederick, Md.
Peach, P. L	Mitchellsville, Md.
Walls, E. P	Barclay, Md.

Junior Class.

Anderson, J. A	Deal's Island, Md.
Burnside, H. W	Hyattsville, Md.
Choate, R. P	Randallstown, Md.
Cruikshank, L. W	Cecilton, Md.
Ensor, J. G	Philopolis, Md.
Gray, J. P	Glyndon, Md.
Jones, F. A	Comus, Md.
Mayo, E. C	Hyattsville, Md.
Merryman, E. W	Baltimore, Md.
Mitchell, W. R	La Plata, Md.
Mullendore, T. B	Hagerstown, Md.
Ogier, G. R	Baltimore, Md.
Sasscer, E. R	La Plata, Md.
Stoll, E. W	Brooklyn, Md.
Street, J. McC	Rocks, Md.
Watts, H. D	Belair, Md.
Webster, F. O	Baltimore, Md.
Wentworth, G. L	Washington, D. C.

Sophomore Class.

Adams, R. N.	Baltimore, Md.
Angle, W. H.	Hagerstown, Md.
Bay, J. H.	Jarrettsville, Md.
Biser, E. C.	Frederick, Md.
Bradfield, R. P.	Perryville, Md.
Byron, W. H.	Williamsport, Md.
Coburn, T., Jr	Garrett Park, Md.
Cockey, T. C.	Owings Mills, Md.
Crone, W. M.	St. Michael's, Md.
Diggs, E. D.	Port Tobacco, Md.
Dorsey, B. S., Jr	Mt. Airy, Md.
Downes, H. H.	Denton, Md.
Duckett, M., Jr	Hyattsville, Md.
Farrell, F. C.	La Plata, Md.
Gassoway, J. H., Jr	Germantown, Md.
Gourley, T. A.	Burch, Md.
Hayman, E. T.	Stockton, Md.
Hines, C. G.	Chestertown, Md.
Hines, T. L.	Baltimore, Md.
Horner, T. H.	Ashland, Md.
Judd, B. S.	Washington, D. C.
Krentzlin, J. J. A.	Washington, D. C.
Mackall, J. N.	Mackall, Md.
Mayor, G. M.	Frostburg, Md.
Naylor, R. E.	Washington, D. C.
Nicholls, R. D.	Germantown, Md.
Oswald, E. I.	Chewsville, Md.
Parker, A. A.	Pocomoke City, Md.
Patterson, J. G.	McConnellsburg, Pa.
Popham, J. N., Jr	Washington, D. C.
Pouleur, A. L.	Windsor, Conn.
Riggs, D.	Laytonsville, Md.
Roberts, W. P.	Landover, Md.
Rolph, W. C.	Beltsville, Md.
Shepherd, E. L.	Bristol, Md.
Sisk, A. W.	Glyndon, Md.
Smith, W. T.	Ridgely, Md.
Snavely, E. H.	Sparrow's Point, Md.
Somerville, J. W. P.	Frostburg, Md.
Stanley, H.	Laurel, Md.
Steffey, W. S.	Williamsport, Md.
Sturgis, G.	Snow Hill, Md.
Watts, H. F.	Belair, Md.
West, F. H.	Howardville, Md.

White, W	Dickerson, Md.
Whiting, L. W	Hyattsville, Md.
Wright, R. V. L	Williamsport, Md.

Freshman Class.

Bassett, L	Cambridge, Md.
Birckhead, C. O	Friendship, Md.
Blair, E. A	Baltimore, Md.
Carlin, J. J	Slidell, Md.
Caul, H. J	Buffalo, N. Y.
Cockey, A. D	Owings Mills, Md.
Conner, H	Baltimore, Md.
Cooper, R. E	Baltimore, Md.
Copeland, T. C	Washington, D. C.
Court, F	Washington, D. C.
Cramer, C. M	Mt. Pleasant, Md.
Davis, F. E	Hyattsville, Md.
Depkin, G. F. A	Baltimore, Md.
Dorr, G. W	Hyattsville, Md.
Duffy, H. A	Webster Mills, Pa.
Duganne, A. C	Washington, D. C.
Ewell, A. T	Baltimore, Md.
Fesmyer, C. R	Centreville, Md.
Goddard, J. B	Williamsport, Md.
Goodell, R. F	Frederick, Md.
Graham, J. J. T	Ingleside, Md.
Hardesty, W. G	Willows, Md.
Hunter, J. M	Roe, Md.
Hutchins, A. F	Barstow, Md.
Lippincott, C. L	Baltimore, Md.
Plumacher, E. H.	Maracaibo, Venezuela.
Plumacher, M. C	Maracaibo, Venezuela.
Pyles, R. G	Barnesville, Md.
Ridgway, C. S	Beltsville, Md.
Salinas, J	Lima, Peru.
Schenck, A. T	Fort Sheridan, Ill.
Shaffer, D. M	Laurel, Md.
Shelton, C. W	Baltimore, Md.
Stayton, T. H	Queen Anne, Md.
Storm, B. H	Reisterstown, Md.
Street, A. D	Fallston, Md.
Tate, J	Washington, D. C.
Thompson, J. G	Landover, Md.
Thompson, W. E	Baltimore, Md.
Torrington, H. E	New York, N. Y.
Towner, J. B	Perryman, Md.

Towner, L. F.	Perryman, Md.
Vrooman, C. C.	Hyattsville, Md.
Waters, F. R. B.	Washington, D. C.
Williams, H. O.	Nanticoke, Md.
Williamson, P. H.	Baltimore, Md.
Williamson, R. S.	Baltimore, Md.
Williar, H. D.	Ruxton, Md.
Winter, H.	Baltimore, Md.
Wood, R. V.	Barnesville, Md.
Zerkel, L. F.	Luray, Va.

Two Year Special Students in Agriculture.

SECOND YEAR.

Brown, D. E.	College Park, Md.
Deaner, T. A. P.	Boonsboro, Md.
Senillosa, E.	Buenos Ayres, Arg. Republic.

FIRST YEAR.

Andrews, S. K.	Hurlock, Md.
Candamo, J. V.	Lima, Peru.
Cannon, L. C.	Bridgeville, Del.
Dent, W. P.	Oakley, Md.
Friend, J. T.	Lydia, Md.
Power, E.	Derwood, Md.
Price, L., Jr.	Hyattstown, Md.
Rice, R. W., Jr.	Baltimore, Md.
Rutledge, J. C.	Rutledge, Md.
Shaw, S. B.	Rehoboth, Md.
Shroeder, F. G.	Washington, D. C.
Walker, J.	Santiago, Chile.
Whiteford, E. S. D.	Cardiff, Md.
Whiteford, C. P.	Whiteford, Md.

Special Students.

Bouic, C. N.	Rockville, Md.
Nicholls, S. B.	Germantown, Md.
Velarde, M. C.	Lima, Peru.

Preparatory Class.

Albrittain, L.	Washington, D. C.
Bissell, R. W.	Baltimore, Md.
Bowie, E.	Marlboro, Md.
Carr, A., Jr.	Hyattsville, Md.
Davis, G. A.	Mount Holly, Va.

Dorsey, G.	Governor's Run, Md.
Estrada, J. R.	Puerto Principe, Cuba.
Galt, D. B.	Hyattsville, Md.
Galt, F. T.	Hyattsville, Md.
Grason, S. C.	Towson, Md.
Green, C. J	Walters, Md.
Harden, M. W.	Roland Park, Md.
Haslup, E. P.	Laurel, Md.
Hurdell, V. H.	New York, N. Y.
Hurt, A. L.	Washington, D. C.
Jones, J. E.	Davidsonville, Md.
Lanahan, D. J.	Laurel, Md.
Lyon, W. J.	Hughesville, Md.
Mackall, T. B.	Mackall, Md.
Mac Speiden, A. E.	Stanleyton, Va.
Marin, E.	Puerto Principe, Cuba.
Maxwall, G. C.	Carsins, Md.
Merryman, N. B., Jr.	Timonium, Md.
Pennell, W. H.	Annapolis, Md.
Ramonet, J. R.	Puerto Principe, Cuba.
Rinck, H. T.	Lakeland, Md.
Ruiz, R.	Puerto Principe, Cuba.
Shipley, G. W.	College Park, Md.
Silvester, R. L.	College Park, Md.
Thompson, H. L.	Baltimore, Md.
Thrasher, H. C.	Deer Park, Md.
Tillson, R. J.	Davis, W. Va.
Toadvin, G. C.	Tyaskin, Md.
Upperco, J. C.	Fowblesburg, Md.
Varona, J. C.	Havana, Cuba.
Waggner, G. M.	Baltimore, Md.
Whiting, H. R.	Hyattsville, Md.
Wickes, P. L.	Baltimore, Md.
Wineke, J. F	Baltimore, Md.
Woodson, A.	Washington, D. C.

Short Winter Course Students.

Beard, H. J.	Feagaville, Md.
Blessing, J. P.	Brownsville, Md.
Cockey, M. G.	Glyndon, Md.
Dawson, P. L.	Trappe, Md.
Gravatt, G. W.	Denton, Md.
Grier, E. P.	Forest Hill, Md.
Hoopes, W. P.	Bynum, Md.
Matthews, E.	Pocomoke City, Md.
Matthews, F. E.	Pocomoke City, Md.
Ramsburg, L. K.	Frederick, Md.
Weaver, J. E.	Greensboro, Md.
Woodhead, C.	Washington, D. C.

Apprentices.

Allen, R. S., Dairying..................Rising Sun, Md.
Bean, C., Dairying.......................Rockville, Md.
Haas, W. C., Dairying...................Limeport, Penn.

Summary of Students.

Senior Class	11
Junior Class	18
Sophomore Class	47
Freshman Class	51
Special Students	3
Two Year Students	17
Short Course Students	12
Preparatory Students	40
Apprentices	3
Total	202

List of Graduates, with Degrees and Addresses.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

Class of '63.

Calvert, C. B., A.B..........................College Park, Md.
Sands, W. B., A. B...........................Lake Roland, Md.

Class of '64.

Franklin, J., A.B..........................306 San Pedro avenue, San Antonio, Texas.
Todd, W. B., B.S.......................... —— ——

Class of '66.

Hall, E., A.B.......................... —— ——
Roberts, L., Ph.B.......................... —— ——

Class of '67.

Soper, F. A., A.B., (M.A. '74)..........................Baltimore, Md.

Class of '73.

Henry, R. S., A.B., (M.A. '75)..........................Charlestown, W. Va.
Miller, O., A. B., (M.A. '75).......................... —— ——
Regester, A., A.B.......................... —— ——
Waters, W. F., A.B.......................... —— ——
Worthington, D., A.B.......................... —— ——
Worthington, W., A.B. .... —— ——

Class of '74.

Coffren, J. H., A.B., (M.A. '77)........................Croome, Md.
Davis, H. M., A.B., (M.A. '77)........................Poolesville, Md.
Griffith, L. A., A.B., (M.A. '77)........................Marlboro, Md.
Hall, D., M.A........................ —— ——
Norwood, F. C., A.B., (M.A. '77)........................Frederick, Md.

Class of '75.

Gray, J. B., A.B........................Prince Frederick, Md.
Hyde, J. F. B., A.B........................110–114 Hanover street, Baltimore, Md.
Lerch, C. E., B.S........................110–114 Hanover street, Baltimore, Md.
Miller, L., B.S........................Albuquerque, New Mexico.

Class of '76.

Blair, N. J., B.S........................Custom House, Baltimore, Md.
Thomas, T., B.S........................Maddox, Md.
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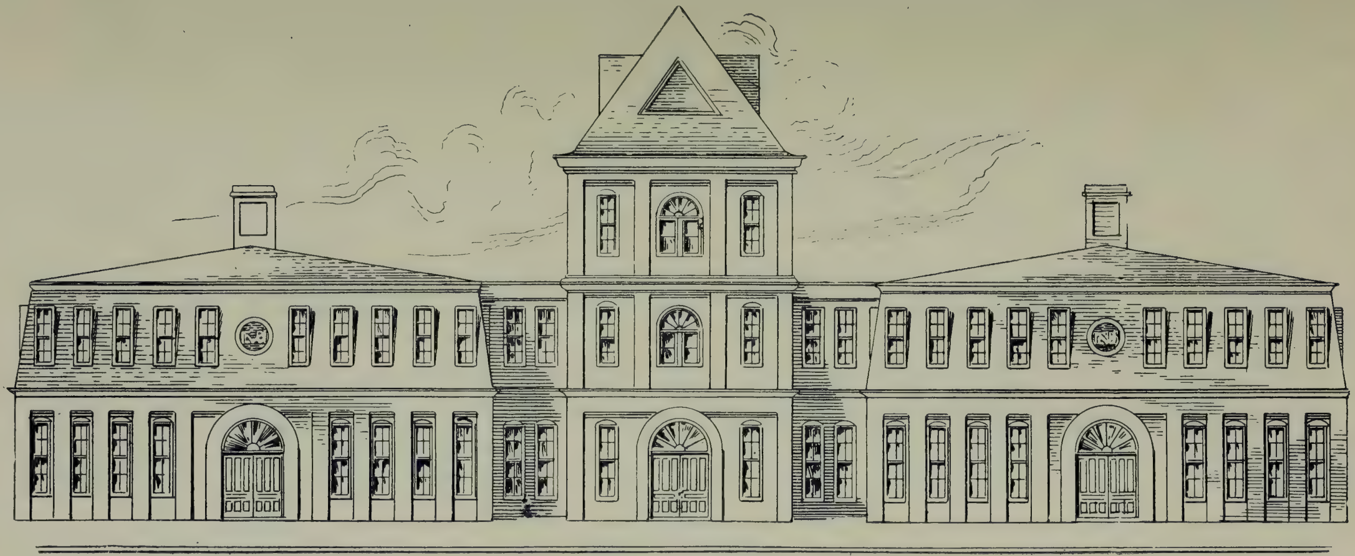

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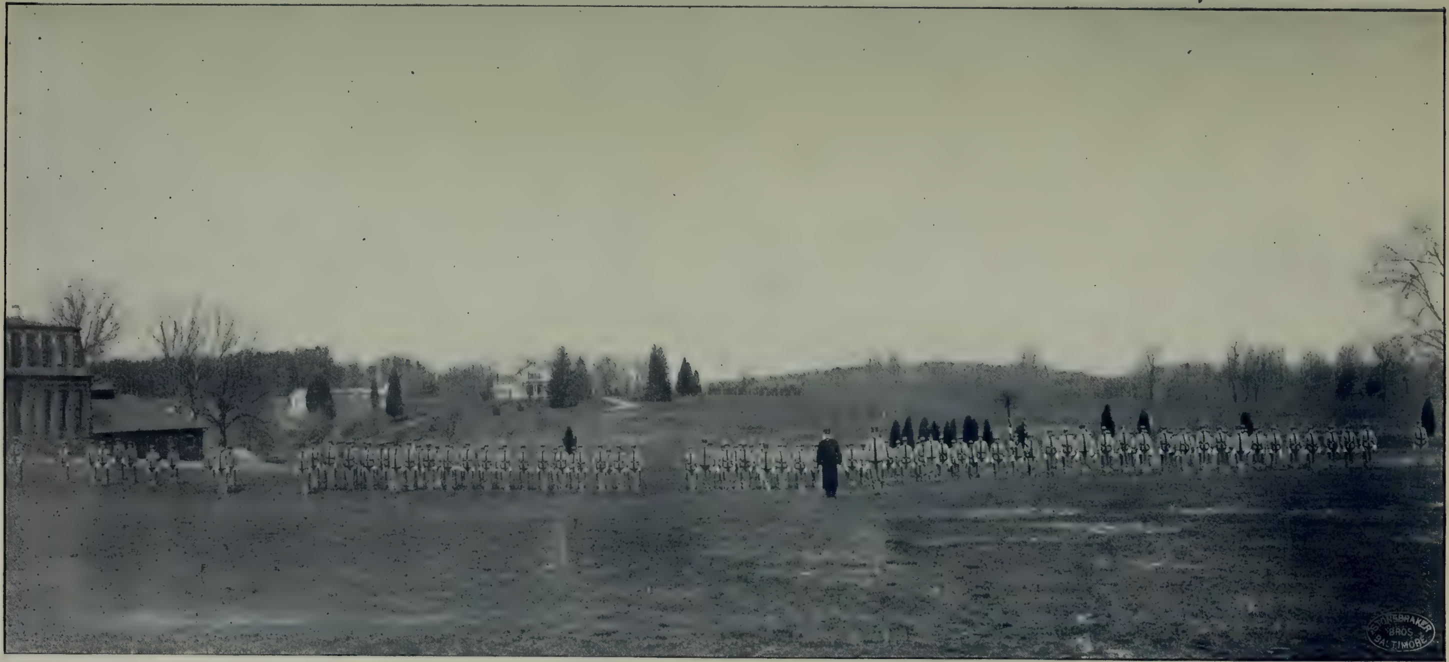

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Calendar for 1904-1905.

First Term.

September 13th and 14th, Entrance Examinations.

Thursday, September 15th, 1 P.M., College Work Begins.

Friday, October 14th, Meeting of Board of Trustees.

Friday, December 9th, Meeting of Board of Trustees.

Thursday, December 22d, 4 P.M., First Term Ends.

Thursday, December 22d, 4 P.M., to Tuesday, January 3rd, noon, Christmas Holidays.

Second Term.

Tuesday, January 3rd, noon, Second Term Begins.

Friday, March 10th, Meeting of Board of Trustees.

Friday, March 24th, Second Term Ends.

Third Term.

Monday, March 27th, Third Term Begins.

Wednesday, April 19th, 4 P.M., to Tuesday, April 25th, 1 P.M , Easter Holidays.

June 5th to 10th, Final Examinations.

Friday, June 9th, Meeting of Board of Trustees.

Sunday, June 11th, Baccalaureate Sermon.

Monday, June 12th, Class Day.

Tuesday, June 13th, Alumni Day.

Wednesday, June 14th, 11 A.M., Commencement Day Exercises.

Historical Sketch.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original college building was erected, and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land-grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became in part, at least, a State institution, and such it is at the present time.

In 1887 the Federal Congress passed a second important Act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees, so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well-recognized factor in the agricultural development of Maryland.

Once more, in 1892, the Federal Government came to the aid of the agricultural and mechanical colleges. By the Act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

During the last twelve years the history of the College has shown a record of steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings — the library and gymnasium building, the chemical laboratory, the mechanical engineering building (recently enlarged), Morrill Hall, the college barn, the sanitarium and the new administration building and barracks, as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Entomology and Vegetable Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

Location and Description.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least nine trains a day, from each city, stop at College Station, thus making the place easily accessible from all parts of the State. The telegraph station is Hyattsville, connected with the College by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway.

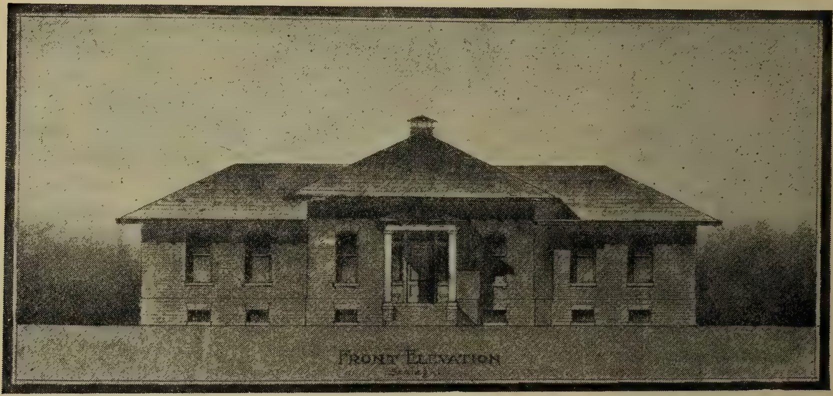
The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres, and is devoted to the gardens, orchards, vineyard and to general farming.

The College barracks is a five-story brick building containing student quarters and the Domestic Department. The dormitories are large, well-ventilated and provided with fire-escapes, bath and water rooms. All the buildings are lighted with gas and heated with steam from central plants on the College grounds.

The Mechanical Engineering Department is located in a two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex designed to afford additional facilities in forging and foundry work which has been erected and equipped during the past year. It is a model building of its kind.

The chemical building was completed in 1897 and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned to the Professor of Chemistry at this College by an Act of the General Assembly. He is thus the State Chemist.

In 1893 the present building of the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is on the second floor and is large, well-lighted and convenient for the purpose.



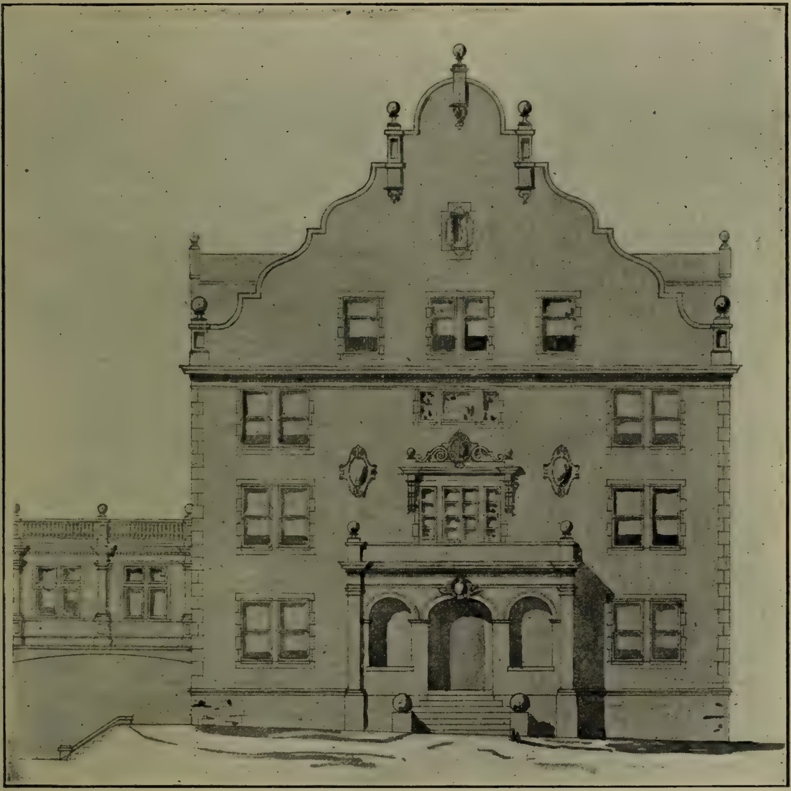
Sanitarium.

Among the recent additions to the group of College buildings is Morrill Hall. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments have suffered, and greatly extending their opportunities for the development of high grade scientific work. A greenhouse for work in Entomology and Vegetable Pathology is now being added.

The College Sanitarium, completed in 1901, has proved a most efficient means of isolating infectious diseases which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished and equipped with modern hospital facilities.

An experienced nurse is in constant attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.



East Elevation of the Administration Hall and Dormitories.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

Recent Improvements and Repairs.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated, and equipments secured.

Among recent improvements additional dormitories, accommodating twice the number of students; an auditorium and offices in the Administration Building, now nearing completion; a complete renovation of the original College barracks; a water supply from drilled wells of considerable depth; a modern steam heating plant; gas and electric lighting; lavatories; forced ventilation, etc., all of which establishes quarters and class-rooms of unusually good sanitary arrangements.

North Elevation of Administration Hall and Dormitories.

General Aim and Purpose.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of the man of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to the many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has been prepared for it by á thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year his work consists wholly of a few closely-connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical workshops a student is able to be become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

Departments---Equipment and Work.

The following is a brief account of the equipment of the several departments of the College and the general character of the instruction given in each:

Agricultural Department.

W. T. L. TALIAFERRO, Professor.
C. F. DOANE, Instructor in Dairying.
E. P. WALLS, Assistant.

The Agricultural Department offers four courses—(a) a four-year course, leading to the degree of B.S.; (b) a special two-year course, for proficiency in which a certificate is awarded (see p. 49); (c) a special creamery course; (d) a ten-week winter course (see p. 49).

Outline of Four-Year Course.

Course I, Lecture Course in Agriculture.—This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and, it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers cannot fail to have an excellent effect, not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Scoring Horses.

Students taking the agricultural or general science courses are required to attend these lectures. With other students attendance is optional.

Course II, Live Stock—*Third Term, Sophomore Year—Seven periods per week; three theoretical, four practical.* This course is devoted to the detailed study of farm live stock, including stock judging and breeds of stock. Prof. Curtiss' "Horses, Cattle, Sheep and Swine" is used as text-book, supplemented by the "Breeders' Gazette," "Hoard's Dairyman," and other live stock journals and experiment station bulletins for collateral reading and reference. Practical lessons are drawn from the stock on the Experiment Station farm. The United States Cattle Quarantine Station for the port of Baltimore is but a few miles from the College, and whenever there is an importation of special merit the students are taken to the Quarantine Station to inspect and study the stock imported. Another valuable feature of this course is the taking of the students to the county fairs where the best stock is exhibited, and to private stock farms of recognized excellence, where not only the animals themselves, but also the methods of handling them, are made the subject of careful study and inspection. For this purpose this course is extended through the fair season in the fall term of the Junior year.

Course III, Crop Production—*First Term, Junior Year—Ten periods per week; four theoretical, six practical.* Crop production, the study of farm crops in detail, as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation, harvesting. Morrow & Hunt's "Soils and Crops" is used as a text-book. The College farm of two hundred and sixty acres furnishes the opportunity for practical work.

A Corner in the Alfalfa Field.

A special feature of this course is the study of crop improvement by selection and breeding. The first breeding plot of corn in Maryland was planted on the Experiment Station farm by the College students, from seed ears selected and scored by them with the assistance of the instructor in agronomy. The same system of student work is used in all corn breeding work and other crop growing experiments whenever practicable. Many students do overtime work, for which they are paid by the hour.

The practical work of this course will be continued into the spring term of the Junior year.

Course IV, Stock Breeding—*First and Second Term, Junior Year. Eight periods per week; four theoretical, four practical.* The principles of stock breeding. The wonderful success which has attended the efforts of well-informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to, the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text-book in this course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

Course V, Soils—*Second Term, Junior Year—Eight periods per week; four theoretical and four practical.* The study of the physical and chemical conditions of the soil in their relation to profitable agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text-books, laboratory and field-work. The text-book used is "The Soil," by Prof, King. No State in the Union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

Scoring Corn.

Course VI, Farm Drainage—*Third Term, Junior Year—Eight periods per week; four theoretical, four practical.* The text-book used in this course is Waring's "Drainage for Profit and Health." Practical work in open ditching and under drains is provided for the students on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

Course VII, Fertilizers and Soil Fertility—*First Term, Senior Year—Ten periods per week.* Text-books: Vorhees' "Fertilizers," Roberts' "Fertility of the Land," and Experiment Station bulletins.

Course VIII, Dairying and Creamery Work—*Second Term, Senior Year—Ten periods per week; theoretical and practical.* Text-books: Wing's "Milk and Its Production," Russell's "Dairy Bacteriology," Farrington & Wall's "Testing Milk."

Course IX, Farm Machinery—*Third Term, Senior Year—Ten periods per week.* Lectures and practical work.

Course X, Farm Economics—*Third Term, Senior Year.* Lectures.

Other work in the Senior year will be arranged on consultation with the head of the department.

Geology.

Course I, Geology — *First and Second Terms, Freshman Year*— *Four periods per week first term, five the second.* This course is required in the Agricultural and General Science Courses. Attention is chiefly given to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions. Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference.

Department of Mechanical Engineering.

J. HANSON MITCHELL, Professor.

J. C. BLANFORD, Assistant.
E. T. GARNER, Assistant.

This department offers a course to those who desire to prepare themselves to design and construct machinery and superintend engineering establishments. With this end in view is offered an education based on mechanics, drawing, mathematics, physics and modern languages, together with a practical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department, and the hours allotted to each, will be found in the "Outline of Courses."

Equipment—The Mechanical Engineering Laboratories consist of a two-story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and two lecture rooms; a one-story brick building, in which is the forge shop and foundry, and an annex, 25 feet by 50 feet, containing two 60-horse-power boilers, which furnish steam for power, heat and experimental purposes.

The wood-working shop contains accommodations for students in bench work and wood-turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grindstone.

View in Shops.

In the forge shop are sixteen power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths' tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour; a brass furnace, one Mellet core oven, and with the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 20-inch Fifield engine lathe, with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine lathes, one 24-inch Gray planer, one 16-inch Smith & Mills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool-grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

An 8 by 12-inch engine drives the machinery of the wood-working and machine shops. It was presented to the College by the City of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy. A 10-horse-power Fairbanks gasoline engine drives the blowers in the foundry and forge shop.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue print facilities.

Tours of Inspection.—The members of the Senior Class go to Baltimore or Washington for the purpose of inspecting well-known manufacturing plants.

Course I, Mechanical Drawing—*Three Terms, Freshman Year—Six periods per week.* Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being enclosed in covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

Course II, Technical Instruction—*First Term, Freshman Year—Five periods per week.* Explanation of the reading of mechanical drawings. The proper cutting, angles, care and adjustment of carpenter tools. Relative strength of wood joints. Wood: its shrinking and warping, and how to correct and prevent. Text, Goss' "Bench-work in Wood." Drill in problems in Arithmetic, Algebra and Drawing, by notes and lectures.

Course III, Shop Work—*Three Terms, Freshman Year—Six periods per week.* Use and care of carpenter tools; exercises in sawing, mortising, tenoning and laying out work from drawings, wood-turning and pattern-making.

Course IV, Mechanical Drawing—*Three Terms, Sophomore Year—Six periods per week first term; four the second; five the third.* Free-hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading. Text-book, Rouillion's "Mechanical Drawing."

View in Shop.

Course V, Elementary Applied Mechanics—*First Term, Sophomore Year—Four periods per week.* Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting and bending movements of beams. Jamieson's "Applied Mechanics" is the text used.

Course VI, Blacksmithing—*Three Terms, Sophomore Year—Six periods per week.* The elementary operations of drawing out, upsetting, bending and welding of iron, and making and tempering of steel tools; moulding and casting in iron, and the management of the cupola.

Course VII, Descriptive Geometry—*Second and Third Terms, Sophomore Year—Three periods per week second term; two periods the third.* Its relation to mechanical drawing, and the solution of problems relating to magnitudes in space, bearing directly upon those principally used by the mechanical engineer. Text-book, Fauce's "Descriptive Geometry."

Course VIII—Elementary Machine Design—*Three Terms, Junior Year—Six periods per week.* The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Wells' "Engineering, Drawing and Design" is the text used.

Course IX, Shop Work—*Three Terms, Junior Year—Six periods per week.* Elementary principles of vise and machine work, which includes turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

Course X, Steam Engines and Boilers—*First Term, Junior Year—Four periods per week.* The principles of steam and the steam engine; the slide valve and valve diagrams; the indicator and its diagram; steam boilers, the various types and their advantages, including the method of construction. Text used is Jamieson's "Steam and Steam Engines."

Course XI, Power Plants—*First Term, Senior Year—Two periods per week.* Lectures on the location, construction, equipment and engineering of power plants.

Course XII, Machine Design—*Three Terms, Senior Year—Four periods per week first term, six the second and four the third.* The calculation and design of pipes, belt and tooth-gearing, beams and cranes. Text, Low & Bevis' "Machine Drawing and Design."

Course XIII, Shop Work—*Three Terms, Senior Year—Eight periods per week first term, ten periods second and third terms.*—Advanced machine work; the laying out, assembling and construction of some piece of machinery, such as an engine lathe or dynamo.

Course XIV, Testing—*Third Term, Senior Year—Six periods per week.* A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam gauges, slide valve setting and indicator practice, the slide rule, and determining the amount of moisture in steam.

Department of Mathematics.

R. W. SILVESTER, Professor.

HENRY T. HARRISON, Assistant.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

Course I, Elementary Mathematics—*First Term, Freshman Year—Three periods per week.* General review.

Course II, Algebra— *Three Terms, Freshman Year—Five periods per week.* Text-book, Wentworth's College Algebra.

Course III, Plane Geometry— *Third Term, Freshman Year; First Term, Sophomore Year—Five periods per week.* Text-book, Wentworth's Plane Geometry.

Course IV, Solid Geometry—*Second Term, Sophomore Year—Five periods per week.* Text-book, Wentworth's Solid Geometry.

Course V, Trigonometry—*Third Term, Sophomore Year—Five periods per week.* Text-book, Wentworth's Plane Trigonometry.

Course VI, Analytical Geometry—*First Term, Junior Year—Five periods per week.* Text-book, Wentworth's Analytics.

Course VII, Differential Calculus—*Second Term, Junior Year—Five periods per week.* Text-book, Osborne's.

Course VIII, Integral Calculus— *Third Term, Junior Year—Five periods per week.* Text-book, Osborne's.

Department of English and Civics.

F. B. Bomberger, Professor.

Charles S. Richardson, Assistant.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. A clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature (English and American), theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

English Courses.

Course I, Language and Composition — *Three Terms, Freshman Year—All students—Five periods per week.* English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Texts used, Lockwood's "Lessons in English," Buehler's "Exercises in English" and Swinton's "Word Analysis." Work in composition consists of the preparation of twelve themes as follows:

First Term —1. Why I Came to the Maryland Agricultural College.
2. How to Do Something—Hunt, Fish, etc.
3. How to Make Something.
4. My Favorite Book.
5. A Description of Some Place or Thing.
Second Term—6. A Character Sketch.
7. A Personal Experience.
8. Account of Some Contest.
9. An Essay—Abstract Subject.
Third Term—10. An Essay—Public Question.
11. An Argument.
12. An Oration.

Course II, American Literature—*Third Term, Sophomore Year—All Students—Three periods per week.* A study of the most prominent writers, with a view to giving the student an exact knowledge of their works. Text used, Watkins' "American Literature."

Course III, Rhetoric and Composition—*First and Second Terms, Sophomore Year—All students. Four periods per week.* Principles and practice of rhetoric and composition. Text used, Lockwood's and Emerson's "Composition and Rhetoric."

Work in Rhetoric consists of a study of the Principles of Diction, the Sentence, the Paragraph, the Discourse, Forms of Prose, and the Nature, Form and Structure of Poetry.

Work in Composition consists of twelve themes, as follows:

First Term —1. Description of a Place.
2. Description of a Person.
3. Narration of Some Personal Experience.
4. Narration of Imaginative Experience.
5. Criticism of Some Book.
6. An Expression of Opinion.

Second Term—7. An Essay.
8. An Argument.
9. Criticism of Some Book.
10. An Oration.
11. A Descriptive Narration.
12. An Argumentative Oration.

Course IV, English Literature—*Third Term, Sophomore Year—All students—Three periods per week.* Study of the History and Chief Writers of English Literature. Text used, Stopford Brooke's "English Literature."

Course V, Composition—*Three Terms, Junior Year—All students—One period per week.* Practice in English Composition. Special lectures. Work in Composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the third term.

Course VI, English Literature—*First Term, Junior Year—Classical students only—Five periods per week.* Text-book, lectures, readings, composition. Texts used, Pancoast's "English Literature," Halleck's "English Literature," and Taine's "English Literature."

Course VII, American Literature—*Second Term, Junior Year—Classical students only—Five periods per week.* Text-book, lectures, readings, composition. Text used, Pattee's "American Literature."

Course VIII, Logic—*Third Term, Junior Year—Classical students only—Five periods per week.* Principles and practice of logic. Text used, Jevon's-Hills "Logic."

Course IX, English Classics—*Three Terms, Senior Year—Classical students only—Four periods per week.* Critical study of English classics, following the outline for college entrance requirements in English.

Course X, Psychology—*First and Second Terms, Senior Year—Classical students only—Four periods per week.* Principles of Psychology. Text-book and lectures. Text used, Dewey's "Psychology."

Course XI, Literary Criticism—*Third Term, Senior Year—Classical students only—Three periods per week.* Text and lectures. Text used, Winchester's "Principles of Literary Criticism."

History and Civics Courses.

Course I, Ancient History—*First and Second Terms. Freshman Class—All students—Four periods per week.* Outlines of Ancient Histroy. Text-book and lectures. Text used, "Myers' "Ancient History."

Course II, English History—*Third Term, Freshman Year—All students—Three periods per week.* Study of Outlines of English History. Text used, Montgomery's "English History."

Course III, Mediaeval and Modern History—*First and Second Terms, Sophomore Year—Classical students only—Four periods per week.* Outlines of Mediæval and Modern History; text-book and lectures. Text-book used, Myers' "Mediæval and Modern History."

Course IV, Political Science—*First Term, Junior Year—Classical students only—Five periods per week.* Government; special lectures on Constitution of Maryland. Text-books used, Wilson's "The State" and Bryce's "American Commonwealth."

Course V, American Government—*Second and Third Terms, Junior Year—Classical, Scientific and Mechanical students—Three periods per week.* Civil Government in the United States. Text-books used, Fiske's "Civil Government," Hinsdale's "American Government," and Clark's "Outlines of Civics."

Course VI, Political Economy—*First and Second Terms, Senior Year—Classical and Mechanical students—Four periods per week.* Principles of Political Economy and Industrial Development of the United States, Economic Science and Current Problems. Text used, Walker's "Political Economy."

Course VII, Business Law—*Third Term, Senior Year—Classical students only—Three periods per week.* Lectures on "Business Law" as used in everyday life. Text used, Parsons' "Commercial Law."

Department of Chemistry.

DR. H. B. MCDONNELL, Professor.

A. B. FOSTER, Assistant.

This department is charged with two distinct classes of work: (1) the State fertilizer and food control, and (2) the instruction of students. The State work necessitates the publication of the "Quarterly," which is usually made up of the results of analysis of fertilizers and feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of this work, the assistants invariably being college graduates.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room, with first-class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and material are provided from the supply room, as needed.

The department is provided with a small but well-selected library of standard reference books on chemistry, to which additions are made from time to time.

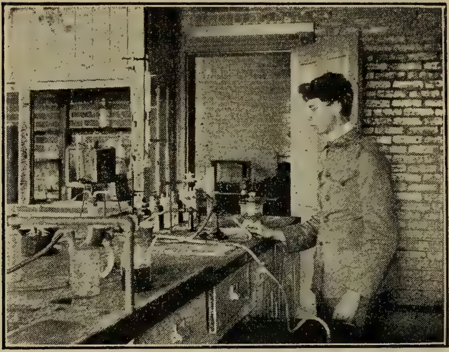
Instruction in chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals; the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry which is essential in the education of every man, no difference what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Students' Desk—Sophomore Class.

Chemistry becomes an elective study in the Junior year, when an advanced course in general chemistry is given, together with qualitative analysis, quantitative analysis, mineralogy and chemical technology. Four hours per week are devoted to the lecture room, and from twelve to fifteen hours to laboratory work.

During the Senior year the work consists of organic chemistry and agricultural chemical analysis, including analysis of fertilizers, feeding stuffs, water, etc., and a short course in assaying. The work of the last term consists, mainly, in the preparation of a thesis involving original work.

The object of the full chemistry course is to prepare the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture. The demand for our graduates for such positions is far in excess of the supply.



Students' Desk—Senior Class.

Each student in chemistry is charged $6.00 per year to partly cover the expense of the material used. This does not include breakage of apparatus, which is charged extra. This charge seldom exceeds one or two dollars in the Sophomore year, or two or three dollars in the Junior or Senior year, depending upon the habits of the student.

Course I, General Chemistry—*Sophomore Year—Four periods per week.* Lectures and recitations. Text-book, Remsen's "Introduction to the Study of Chemistry."

Course II, General Chemistry.—*Sophomore Year—Three periods per week for the first and third terms; four for the second term.* Practical course in Chemistry to accompany Course I. The students perform the experiments.

Course III, Advanced Chemistry—*Junior Year—Three or four periods per week.* Text-book, Remsen's "Advanced Chemistry."

Course IV, Qualitative Analysis—*First Term, Junior Year—Lectures, two periods per week; practical work, twelve periods per week.* Text-book, Mason's "Qualitative Analysis."

Course V, Mineralogy—*Second Term, Junior Year—Lectures, two periods per week; practical work, four periods per week.* Brush's "Determinative Mineralogy."

Course VI, Quantitative Analysis—*Second Term, Junior Year—Six periods per week, mostly practical work.* Quantitative Analysis begun; determination of water, iron, magnesium, calcium, the common acids, etc. Reference book, Fresenius' "Manual of Assaying."

Course VII, Assaying—*Third Term, Junior Year—Four periods per week.* Reference book, Brown's "Manual of Assaying."

Course VIII, Volumetric Analysis—*Third Term, Junior Year—Eight periods per week, mostly practical.* Reference books, Fresenius' "Quantitative Analysis" and Sutton's "Volumetric Analysis."

Course IX, Organic Chemistry—*Senior Year—Four periods per week.* Lectures and recitations. Reference book, Remsen's.

Course X, Organic Preparations—*First and Second Terms, Senior Year—Four periods per week.*

Course XI, Agricultural Chemical Analysis—*First and Second Terms, Senior Year—Eight periods per week.* Text-book, "Methods of Analysis of the Association of Official Agricultural Chemists."

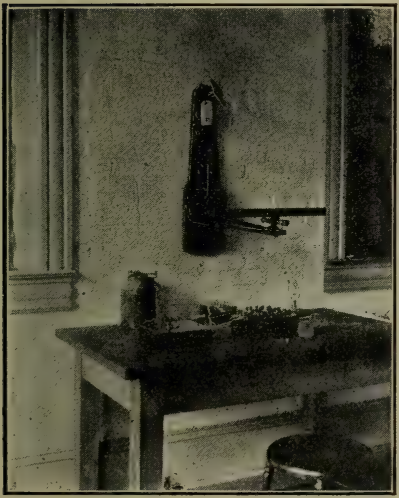
Course XII—*Third Term, Senior Year—About twelve to eighteen periods per week.* This course is the preparation of a thesis involving original research in some branch of Agricultural or Industrial Chemistry.

Post-Graduate Work. The department will arrange advanced courses in Agricultural Chemistry for graduate students.

Department of Physics.

HENRY LANAHAN, Professor.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.


Apparatus for Measuring Electrical Resistance.

Course I, Elementary Physics—*First and Second Terms, Sophomore Year—Two periods per week.* The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "High School Physics."

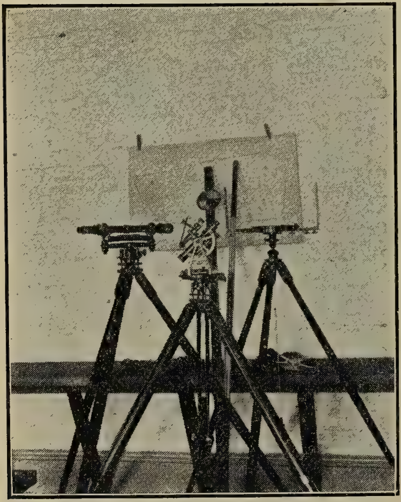
Course II, Physics—*Three Terms, Junior Year—Four periods per week class-room work, and four periods per week laboratory work.* The course begins with a review of mechanics, after which heat, sound, electricity and magnetism and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurement. Written reports of the work done in the laboratory are required weekly. The text-books used are Ames' "Theory of Physics," and Ames and Bliss' "Manual Experiments in Physics."

Course III—*Three Terms, Senior Year.* More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

Department of Civil Engineering.

HENRY LANAHAN, Professor.

Course I, Surveying—*Three Terms, Junior Year—Two periods per week class-room work; three periods per week field practice.* The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; the dividing of land; the theory of the stadia; true meridian lines; leveling; topographical surveying; railroad curves and cross-sectioning. If time permits, the methods of locating and staking out new roads will be taken up, and some attention given to road construction. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level. Texts, Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual."



A Group of Surveying Instruments.

Course II, Graphic Statics—*First Term, Senior Year—Four periods per week.* Including the theory and practice of the graphical methods of determining stresses in frame structures, particularly roof trusses, and bending movements and shears in beam. The course is based on Hoskins' "Graphic Statics," and many of the problems are solved analytically as well as graphically.

Course III, Strength of Materials—*Second Term, Senior Year—Four periods per week.* Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns and shafts. The text used is Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.

Course IV, Railway and Highway Engineering—*Three Terms, Senior Year.* A course in railroad and highway location and construction is also offered. Text, Searles' "Field Engineering," Spalding's "Roads and Pavements," and the reports of the highway division of the Maryland Geological Survey.

Department of Horticulture.

James S. Robinson, Professor Emeritus.

——— ———, Professor.

Course I—*Third Term, Sophomore Year—Seven periods per week.* Lectures and practical work. (1) Methods of plant propagation. (2) Character of soil as best adapted to the different fruits and vegetables. (3) Methods of management of soils and soil improvements. (4) Manure, composts and commercial fertilizers. (5) Hot-beds and cold-frames. The practical work is intended to give students a knowledge of the operations in the garden and orchard. These exercises will be supplemented by familiar talks on the operations performed.

Class in Pruning.

Course II, Small Fruit Culture—*First Term, Junior Year—Four periods per week.* Lectures and discussion on planting, cultivation and marketing of small fruits.

Course III, Floriculture—*First Half, Second Term, Junior Year—Six periods per week.* Lectures and practical work. Management and care of green-houses; plant propagation, heating and ventilation.

Landscape Gardening—*Second Half, Second Term, Junior Year—Six periods per week.* Lectures and demonstrations. Special attention is given to rural ornamentation, together with a brief study of ornamental trees and shrubs.

Course IV Olericulture—*Third Term, Junior Year—Six periods per week.* Lectures; a discussion of the principles of vegetable gardening, packing and marketing.

Market Gardening.

Course V, Pomology — *First Term, Senior Year—Two periods per week.* Text-book and lectures. A discussion of the principles underlying the growing of orchard fruits. Selection of location for the orchard, orchard management, handling and marketing of the fruit.

Course VI, Forestry—*Second Term, Senior Year— Two periods per week.* Lectures. Discussion of the general principles of forestry. The effect of forest upon soil and climate. A brief study of forest trees and silvicultural methods.

Course VII, Plant Breeding and Plant Evolution—*Third Term, Senior Year— Two periods per week.* Lectures. The principles of plant breeding, plant variation; the effect of soil, climate, cultivation and other ameliorating influences upon plants. The crossing and hybridizing of plants. Heredity, selection and origin of domestic varieties. A brief history of plant evolution.

Course VIII, Special Research Work—*Three Terms, Senior Year.* Time and work to be arranged with each student individually. The course will be given only to Seniors, and must be preceded by Courses I to IV. It may be taken by Seniors as their major subject, or as one of their minors.

Department of Veterinary Science.

Samuel S. Buckley, Professor.

Course I, Microscopy—*First Term, Sophomore Year—For students in agricultural and scientific courses—Four periods per week.*

Laboratory exercises. The study of simple, compound and dissecting microscopes. Laboratory methods and microscopical technique. This course is designed to equip students for the more technical work in advanced courses.

Course II, Bacteriology—*Second Term, Sophomore Year—For students in agricultural and scientific courses. Five periods per week.* Lectures and laboratory exercises. The study of bacteria, methods of propagation. Culture media, mounting and staining specimens. Disinfection, sterilization, pasteurization, etc.

A Post-Mortem.

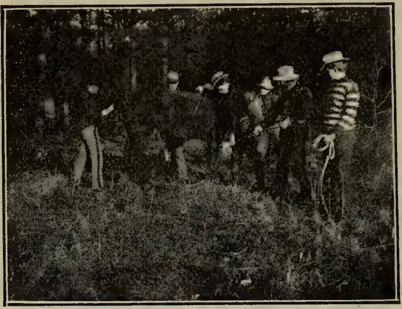
Course III, Bacteriology—*Third Term, Sophomore Year—For students in scientific and regular agricultural courses. Five periods per week.* Lectures and laboratory exercises. Completion of course in bacteriology as outlined in Course II.

Course IV, Comparative Anatomy and Physiology—*First Term, Junior Year—For students in biological-scientific course. Six periods per week.* Lectures and laboratory exercises. The comparative anatomy and physiology of the domesticated animals, with special reference to the processes of nutrition.

Course V, Comparative Anatomy and Physiology—*Third Term, Junior Year—For students in biological, scientific and regular agricultural courses—Six periods per week.* Lectures and laboratory exercises.

Course VI, Veterinary Science—*Senior Year.* For students of the agricultural course this is a required study throughout the year. It embraces nursing, emergency treatment, administration of medicines, means of restraint, the common diseases, and general care and management of the domesticated animals.

Short Veterinary Courses.—Students in the Short Winter Course in Agriculture are required to attend the twenty lectures given on veterinary subjects and to examine patients in the stables. Students of the two-year agricultural course receive during the first year one lecture and four practical periods per week for the first term; two lectures and six practical periods per week for the second term. During the second year they receive two lectures and four practical periods per week for the three terms. The character of the work is such as to enable a stock owner to care for animals in health and disease in an intelligent manner, to appreciate symptoms of disease, and to treat the commoner disorders and diseases of the domesticated animals.



Class in Veterinary Science.

Department of Entomology and Zoology.

T. B. Symons, Professor.
A. B. Gahan, Assistant.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed, with a view of giving the students as broad a knowledge of the subject as practicable in the time devoted to it. In the laboratory, attention is given to methods of investigation, insect anatomy, and preparation and classification of collections made in the field. The work of this department is open only to Juniors and Seniors in the Agricultural, Chemical and General Science Courses, unless by special arrangement.

Course I, Zoology—*First and Second Terms, Junior Year—Six periods per week; lectures and laboratory exercises.* This course involves a study of representatives of the principal groups of animals, together with lectures on their structure and classification.

Course II, Entomology—*Third Term, Junior Year—General Course—Eight periods per week.* Lectures and laboratory exercises. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders, and the more important families; the habits and life history of insects, with special reference to those species that are of economic importance. The laboratory and field work includes the study of the more general features of insect anatomy, the determination of general species, and the collection and preservation of insects.

Course III, Entomology—*Senior Year.* Advanced course. Open only to students who have completed Courses I and II or their equivalents. This course consists of special work in morphology or classification, or working out the life history of insects. Students making entomology their major will be required to devote at least ten hours per week, throughout the year, to this course, and prepare an original thesis upon the subject chosen or assigned.

Class in Entomology.

Department of Botany and Vegetable Pathology.

J. B. S. NORTON, Professor.
FREDERICK H. BLODGETT, Assistant.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture, for since plants in the field and garden are the subjects dealt with, the study of plant life must be one of the fundamental sciences on which such work is based. No course can be taken unless those preceding it or their equivalent have been pursued.

The equipment and means of illustration and demonstration consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants, microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Course I, Elementary Botany—*Third Term, Freshman Year—Two theoretical and four practical periods per week.* Laboratory and field work, with supplementary reading, using principally Leavitt's "Outlines of Botany," or Bergen's "Foundations of Botany," and taking up the fundamental facts regarding structure and elementary physiology of the common plants with a systematic study of the spring flora. Each student begins a collection of plant specimens to illustrate a subject in which he is specially interested.

Field Class in Botany.

Course II, Ecology—*First Term, Sophomore Year—Two theoretical and four practical periods per week.* The work of Course I is continued with the wild and cultivated fall plants, and special attention given to the associations of plants and their relations to environment, light, water, soil, etc. In connection with these exercises the reproductive organs of plants and their work is studied. Suitable literature for reading is used to supplement the field and laboratory work.

Course III, Morphology and Life Histories of Plants—*Second Term, Junior Year—Three theoretical and three practical periods per week in the Agricultural Course; three theoretical and four practical in the Biological Course.* A comparative study of the structure and life histories of the principal types of plants from the lowest to the highest is pursued, special attention being given to those group of plants of particular economic interest. The exercises consist of lectures and microscopic work in the laboratory. In addition a series of lectures on economic plants is given, in which the structure, geographical distribution, classification and uses of the principal economic plants, including food plants, grasses, timber, fruits, weeds, poisonous plants, parasitic fungi, etc., is studied.

Course IV, Plant Physiology—*First Term, Senior Year—Two lectures and a minimum of eight periods of experimental laboratory work.* This course may be elected as a minor.

Course V, Plant Pathology—*Second Term. Senior Year—Two lectures and a minimum of eight periods of laboratory and field work per week.* This course embraces a study of the causes, symptoms and means of control of plant diseases. It may be elected as a minor following Course IV, or the two courses may be pursued together.

Course VI, Original Research—*Third Term, Senior Year.* The student's time during this term is spent in completing a thesis on some botanical subject on which he has done original work during the year.

Courses in Dendrology, Economic Plant Histology, Special Systematic Work or Studies relating to Plant Breeding, may be arranged for those who wish, to take the places of Courses IV and V.

Senior students selecting Botany as a major study must have had Courses I to IV inclusive, or their equivalents. An outline of the work and hours will be arranged upon consultation with the Professor in charge.

Advanced Work.—Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalents. This work is designed for students who wish to specialize in Botany or in Plant Pathology. An outline of the courses and subjects for original investigation will be arranged upon consultation with the Professor in charge. Students specializing in the above courses may often gain further knowledge by assisting in the work of the department. Special attention is given to students wishing practice in the treatment of plant diseases.

Department of Languages.

THOMAS H. SPENCE, Professor.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German; only students of the *Classical Course are required to take Latin. Students in the General Science Course may elect to take Latin in the Senior year.

The course of study in Latin is given with two ends in view—first, to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of selections from Sallust, Virgil, Cicero, Horace, Cæsar, Ovid, Livy, Juvenal, Tacitus and Terence.

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*The Classical Course, established in 1893, was abolished in 1904. Instruction in Latin, therefore, is offered only to students of the Sophomore, Junior and Senior Years.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given, therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, as a rule, there is no English version of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the especial line of work which he may be pursuing. The study of French is offered as an option in the Senior year.

Latin Courses.

Course I, Translation and Composition—*First Term, Sophomore Year—Six periods per week.* Text-books, Harper and Tolman's "Cæsar." Chase and Stuart's "Sallust." Latin Prose Composition based on text read.

Course II, Translation, Composition, Mythology, Prosody—*Second Term, Sophomore Year—Six periods per week.* Text-books, Harper and Miller's "Virgil," Gayley's "Classic Myths;" Allen and Greenough's "Latin Grammar." Latin Prose Composition based on text read. Lectures on Ancient Geography, etc.

Course III, Translation, Composition, Mythology—*Third Term, Sophomore Year—Six periods per week.* Conclusion of Course II.

Course IV, Translation and Composition—*First Term, Junior Year—Six periods per week.* Text-books, Allen and Greenough's "Cicero," Daniell's "Latin Prose Composition."

Course V, Translation and Prosody—*Second Term, Junior Year—Six periods per week.* Text-book, MacLeane's "Horace."

Course VI, Translation and Composition—*Third Term, Junior Year—Six periods per week* Text-book, Chase and Stuart's "Tacitus." Latin Prose Composition based on text read.

Course VII, Translation and Composition—*First Term, Senior Year—Six periods per week.* Text-book, Chase and Stuart's "Livy." Latin Prose Composition based on text read.

Course VIII, Translation—*Second Term, Senior Year—Six periods per week.* Text-book, West's "Terence." Lectures on Latin Drama.

Course IX. Translation—*Third Term, Second Year—Six periods per week.* Text-book, MacLeane's "Juvenal." In this course an essay on "Roman Morals" or some like subject written in Latin is a part of the required work.

German Courses.

Course I, Grammar and Conversation—*Third Term, Sophomore Year—Six periods per week.* Text-book, Otis' "Elementary German."

Course II, Translation — *First Term, Junior Year — Three periods per week.* Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrop's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Course III, Translation—*Second Term, Junior Year — Three periods per week.* Continuation of Course II.

Course IV, Translation — *Third Term, Junior Year — Three periods per week.* Conclusion of Course III.

Course V, Translation of Scientific German—*First Term, Senior Year—Four periods per week.* Selected readings from various texts and periodicals.

Course VI, Translation of Scientific German—*Second Term. Senior Year—Four periods per week.* Conclusion of Course V.

French Courses.

Course I, Grammar and Composition—*First Term, Senior Year —Five periods per week.* Text-book, Whitney's French Grammar.

Course II, Translation — *Second Term, Senior Year — Five periods per week.* Text-books, Super's French Reader, Rougemont's "La France," Fenelon's "Telmaque," Herdler's "Scientific French Reader," including French scientific periodicals.

Course III, Translation — *Third Term, Senior Year — Five periods per week.* Conclusion of Course II.

Military Department.

...., Commandant.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

Discipline.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent and his parents or guardian must at once remove him from the College.

Promotions.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class; sergeants from the Junior Class, and corporals from the Sophomore Class. No exception will be made to this order, unless it be that the number of men in any one class is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

Uniform.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

Department of Public Speaking.

Charles S. Richardson, Professor.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

Course I—*First Term, Freshman Year—One period per week.* Articulation, accent, modulation, force and elocutionary pause; expressive management of the body, attitude, and motion. Selections of poetry and prose are read and declaimed by students.

Course II—*Second Term, Freshman Year—Two periods per week.* Simple lectures on orators and oratory. Methods of analysis and subjects for oration. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Course III—*First Term, Sophomore Year—One period per week.* A review of all work of Freshman Classes. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc). Lectures on ancient and modern orators, with readings and declamations by students from orations.

Course IV—*Second Term, Sophomore Year—Two periods per week.* Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day (tariff, currency, territorial expansion, trades unions, trusts, Isthmian Canal, etc). Lectures on parliamentary law.

Preparatory Department.

HENRY T. HARRISON, Principal.

CHARLES S. RICHARDSON, Assistant.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

Course I, Arithmetic—*First and Second Terms—Ten periods per week.* Wentworth's Grammar School Arithmetic, completed.

Course II, Arithmetic — *Third Term — Five periods per week.* Advanced work.

Course III, Algebra — *Three Terms — Five periods per week.* Wentworth's Algebra, as far as quadratics.

Course IV, History — *Three Terms — Five periods per week.* United States History, completed.

Course V, Geography—*First Term—Five periods per week.* Descriptive Geography, completed.

Course VI, Geography—*Second and Third Terms—Five periods per week.* Maury's Physical Geography, completed.

Course VII, English—*Three Terms—Eight periods per week.* Spelling, technical grammar, parsing and analysis, composition, letter-writing and elocution.

Department of Physical Culture.

CHARLES S. RICHARDSON, Director.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years. Three periods per week, Preparatory, Freshman and Sophomore years.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

The College Library.

E. T. HARRISON, Librarian.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a large number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

Donations to Library.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey, Weather Service and Highway Commission, Department of Agriculture, Washington, D. C., and the county press for copies of their publications.

Courses of Study.

In order to systematize the work of the numerous departments of the College, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, three distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering and Scientific. A continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the class-work is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientific agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for those who have neither time nor the opportunity to take the regular four-year course. In fact, it is really designed for those actually engaged in farming, and who can spare a few weeks during the winter to attend lectures, and to follow the practical work of the College and Experiment Station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry, chemistry, horticulture, entomology, plant physiology and pathology, farm accounts, road construction, carpentry, blacksmithing, pipe fitting, veterinary science, the principles of citizenship and the elements of business law. The entire expense, including board, need not be over fifty ($50) dollars. The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of the Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering. The course leads to the degree of Mechanical Engineer.

The Classical Course was instituted in 1893 to meet a demand on the part of the patrons of the College for a course of study which should prepare young men to enter the so-called learned professions. The establishment of the Mechanical Course and the additional facilities offered in the various scientific courses have, to a large extent, done away with the necessity of the Classical Course; and the Board of Trustees at their annual meeting in June, taking these facts into consideration and having also in mind that the true mission of the College was to afford instruction in the agricultural sciences and mechanic arts, passed an order abolishing the Classical Course. Those students already pursuing the Classical Course or those who may enter the Sophomore or Junior Classes will be allowed to complete the course and thereby receive the degree of A.B. There will, however, be no instruction offered in Latin to students of the Freshman Class, nor will the degree of A.B. be conferred after 1907.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science — chemistry, zoology, botany, vegetable pathology, entomology, veterinary science, physics, civil engineering or political science. The basis of the course is a thorough training in mathematics, English and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Sophomore year. In the Senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups and studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

The following tables will serve to illustrate in a succinct manner the subjects offered in each item of every session, with the number of periods allotted to each. The subjects for the Senior year are not tabulated for the Agricultural and General Science Courses, as they are mostly elective. Numerals in parenthesis indicate practical work. Two periods of practical work are regarded as equivalent to one period of recitative work, the College day being divided into eight periods of recitative or class work of forty-five minutes each.

Freshman Year.

FIRST TERM. September 15—December 22.	Agricultural.	Scientific.	Mechanical.
Mathematics	8	8	8
English	5	5	5
History	4	4	4
Elocution	1	1	1
Drawing	(6)	(6)	(6)
Physical Culture	(3)	(3)	(3)
Geology	4	4	....
Woodwork	....	....	(6)
Lectures on Agriculture	(1)	(1)	....
Technical Instruction	....	....	5
SECOND TERM. January 3—March 24.			
Algebra	8	8	8
English	5	5	5
History	4	4	4
Elocution	2	2	2
Physical Culture	(3)	(3)	(3)
Geology	5	5	....
Drawing	....	....	(6)
Woodwork	....	....	(6)
Lectures on Agriculture	(1)	(1)	....
THIRD TERM. March 27—June 10.			
Algebra	3	3	3
Geometry	5	5	5
English	5	5	5
History	3	3	3
Literature	3	3	3
Drawing	....	(6)	3 (6)
Woodwork	(6)	....	(6)
Botany	2 (4)	2 (4)	....

NOTE.—Numerals in parenthesis indicate periods of practical work.

Sophomore Year.

FIRST TERM. September 15—December 22.	Agricultural	Scientific.	Mechanical.	Classical.
Plane Geometry	5	5	5	5
Rhetoric	4	4	4	4
Physics	2	2	2	2
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Elocution	1	1	1	1
Botany	2 (4)	2 (4)		
Forging or Foundry	(6)		(6)	
Drawing		(6)	(6)	
Microscopy	(4)	(4)		
Applied Mechanics			4	
Lectures on Agriculture	(1)	(1)		
Latin				5 (1)
History				4
SECOND TERM. January 3—March 24.				
Solid Geometry	5	5	5	5
Rhetoric	4	4	4	4
Physics	2	2	2	2
Chemistry	4 (4)	4 (4)	4 (4)	4 (4)
Elocution	2	2	2	2
Bacteriology	1 (4)	1 *(4)		
Descriptive Geometry		*3	3	
Drawing		*(4)	(4)	
Horticulture	3 (3)	3 *(3)		
Forging or Foundry			(6)	
Lectures on Agriculture	(1)	(1)		
Latin				5 (1)
History				4
THIRD TERM. March 27—June 10.				
Trigonometry	5	5	5	5
Literature	3	3	3	3
German	5 (1)	5 (1)	5 (1)	5 (1)
Chemistry	4 (3)	4 (3)	4 (3)	4 (3)
Bacteriology	1 (4)	1 *(4)		
Descriptive Geometry		*2	2	
Drawing		1 *(4)	1 (4)	
Forging or Foundry			(6)	
Agriculture	3 (4)	3 *(4)		
Lectures on Agriculture	(1)	(1)		
Latin				5 (1)

NOTE.—Numerals in parenthesis indicate periods of practical work.

*Students who intend to pursue the Physical Course in the Junior Year shall substitute Descriptive Geometry for Bacteriology and Drawing for Agriculture and Horticulture.

Junior Year.

		Scientific.				
FIRST TERM. September 15—December 22.	Agricultural.	Biological.	Chemical.	Physical.	Mechanical.	Classical.
German	3	3	3	3	3	3
Physics	4 (4)	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry	4 (4)	4 (4)	4 (12)	....	....	....
Drawing	....	....	....	2 (4)	2 (4)	....
Zoology	2 (4)	2 (4)	2 (4)	....	....	....
Agriculture	4 (6)	....	....	....	....	....
Horticulture	2 (2)	....	....	....	....	....
English	1	1	1	1	1	6
Analytical Geometry	....	....	....	5	5	....
Machine Work	....	....	....	....	(6)	....
Steam Engine	....	....	....	....	....	....
Physiology	....	2 (4)	....	....	4	....
Lectures on Agriculture	(1)	(1)	....	....	....	6
Latin	....	....	....	....	....	5
Constitution	....	....	....	....	....	....
SECOND TERM. January 3—March 24.						
German	3	3	3	3	3	3
Physics	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry	....	4 (4)	4 (12)	....	....	....
Drawing	....	....	....	(4)	2 (4)	....
Zoology	2 (4)	2 (4)	2 (4)	....	....	....
Agriculture	4 (4)	....	....	....	....	....
Horticulture	3 (3)	....	....	....	....	....
Civics	....	3	3	3	3	3
English	1	1	1	1	1	6
Dif. Calculus	....	....	....	5	5	....
Machine Work	....	....	....	....	(6)	....
Botany	3 (3)	3 (6)	....	....	....	....
Lectures on Agriculture	(1)	(1)	....	....	....	....
Latin	....	....	....	....	....	6
THIRD TERM. March 27—June 10.						
German	3	3	3	3	3	3
Physics	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry	....	....	4 (12)	....	....	....
Logic	....	....	....	....	....	5
Drawing	....	....	....	(4)	2 (4)	....
Civics	....	3	3	3	3	3
Horticulture	3 (2)	....	....	....	....	....
English	1	1	1	1	1	6
Integral Calculus	....	....	....	5	5	....
Machine Work	....	....	....	....	(6)	....
Latin	....	....	....	....	....	6
Entomology	2 (6)	2 (6)	....	....	....	....
Agriculture	4 (4)	....	....	....	....	....
Physiology	2 (4)	4 (8)	2 (4)	....	....	....
Lectures on Agriculture	(1)	(1)	....	....	....	....

NOTE.—Numerals in parenthesis indicate periods of practical work.

Senior Year.

FIRST TERM. September 15—December 22.	Mechanical.	Classical.
German	4	
Graphic Statics	4	
Power Plants	2	
Machine Design	2 (2)	
Machine Work	8	
Latin		6
French		5
English		4
Literary Criticism		3
Business Law		3
SECOND TERM. January 3—March 24.		
German	4	
Strength of Materials	4	
Machine Design	2 (4)	
Machine Work	(10)	
Economics	4	4
Latin		6
French		5
English		4
Psychology		4
THIRD TERM. March 27—June 10.		
Machine Design	2 (2)	
Machine Work	(10)	
Testing	(6)	
Economics	4	4
Latin		6
French		5
English		4
Psychology		4

NOTE.—Numerals in parenthesis indicate periods of practical work.

The work for the Senior year in *Agriculture and General Science shall consist of a major subject and two or more minor subjects. This work will be elective upon consultation with the Professor in charge of the major subject.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) periods recitative work, at least ten (10) periods of which shall be devoted to the major subject, and ten (10) to the minor subject.

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*Veterinary Science is a required subject in the Senior Year for students of the Agricultural Course.

Two-Year Course in Agriculture.

FIRST YEAR.

FIRST TERM.		SECOND TERM.		THIRD TERM.	
Agriculture	7 (6)	Agriculture	3 (4)	Agriculture	7 (6)
Chemistry	4 (3)	Chemistry	4 (4)	Chemistry	4 (3)
Woodwork	(6)	Horticulture	4 (4)	Botany	2 (4)
Arithmetic	5	Blacksmithing	(6)	Veterinary Science.	1 (4)
		Veterinary Science.	2 (4)		

SECOND YEAR.

FIRST TERM.		SECOND TERM.		THIRD TERM.	
Agriculture	6 (6)	Agriculture	5 (6)	Agriculture	2 (4)
Horticulture	2 (4)	Horticulture	3 (3)	Horticulture	3 (3)
Veterinary Science.	2 (6)	Veterinary Science.	2 (6)	Veterinary Science.	2 (6)
Botany	3 (6)	Entomology	2 (4)	Entomology	2 (4)
		Dairying.	1 (4)	Stock Feeding	4 (4)

Short Winter Course in Agriculture—Commencing January 4, 1904.

A ten-week course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-year course. This solves the problem for them.

Outline of the Course.

The work of the course consists of lectures and practical exercises in the laboratories, shops, greenhouses, barns and creamery. The subjects handled and the allotment of hours are as follows: Farm crops and cultivation of the soil, 10; plant production, 10; farm live

stock, 20; tobacco, 6; stock feeding, 9; agricultural chemistry, 10; manures, 10; farm accounts, 12; dairying, 40; veterinary science, 20; carpentry, blacksmithing and pipe fitting, 50; plant physiology and pathology, 15; economic entomology, 20; horticulture, 30; road construction, 5; principles of citizenship, 10.

No Expense for Tuition, Use of Laboratories or Supplies.

Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College for $4.00 per week.

Apprenticeships in Agriculture.

The Agricultural Experiment Station, instead of having all the work in the dairy and horticultural divisions performed by regularly paid laborers, has some performed by apprentices. The apprenticeships in these divisions have been established with five objects in view, viz.: 1st.—In order to offer to young men who have a good common school education, and who have not the means for taking either a regular college course, or even a short course, an opportunity to become trained and skilled laborers in the dairy or some class of horticultural work. 2nd.—In order to enable young farmers to take up and engage in some of the specialties in farming on their own farms in an intelligent manner. 3rd.—In order to supply some of the numerous applications that come to the College and Station for skilled help of the character indicated. 4th.—In order to give the College and Station a nucleus for the extension of their work and a more appreciative constituency. 5th.—In order to have some of our labor performed by persons who have more interest in what they are doing than the money they are to receive.

These apprenticeships are open to farmers' sons on the following terms: The Station will board and room the apprentice or pay the equivalent in money as preferred. The Station will furnish the instruction and facilities for instruction given in the several branches pertaining to the specialty taken up.

Those serving a dairy apprenticeship will be expected to devote from three to five hours of each day in receiving class-room instruction, and in study, besides the time devoted to practice in the skilled operations. It is expected that apprentices shall become thoroughly familiar with the scientific feeding of dairy stock, and with all the modern practices pertaining to dairy and creamery management. The plan pursued is to divide the work which would ordinarily be performed by one laborer among three apprentices. A dairy apprentice is expected to stay at the Station for six months.

The horticultural apprentice is to serve for one year on the same terms as the dairy apprentice. The instruction taken in this division will be given at the same time, and with short course students of the College. The horticultural apprentice will be expected to take part in all classes of the work of this division, but he may specialize, so as to become specially skilled in either large fruits, small fruits, truck crops, floriculture, nursery management, greenhouse management or spraying. The apprentices shall have access to the libraries and reading rooms of the Station at all hours.

The Station can accommodate but a limited number of apprentices, and vacancies will be filled in the order in which applications for the same are received.

After an apprentice has served his time, should a position be desired by him, we will take pleasure in recommending him to a place whenever we have a request for skilled help in that particular line, provided that such apprentice has proven himself worthy. So far we have had more applications for skilled help on farms and in creameries than we have been able to supply. Make applications and requests for further information to

H. J. PATTERSON, Director of the
Maryland Agricultural Experiment Station,
College Park, Md.

Degrees.

Bachelor's Degree.

As a requisite for graduation, the candidate for this degree must, in addition to satisfactorily completing the work previously outlined, submit a thesis which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

Master of Arts.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

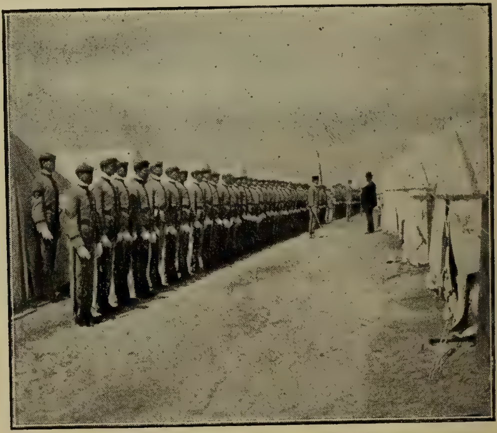
Master of Science.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon College graduates of not less than two years' standing, who are employed in any of the departments of the College, and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.



The Cadet Encampment at St. Louis.

General Information.

Requirements for Admission.

For admission to the College Department Freshman Class, an entrance examination is required. This examination will be held at the College on September 13th and 14th, 1904. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic (complete), algebra (as far as quadratics), political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic (as far as percentage), United States history and political geography. However, applicants having completed the eight grades of the grammar school course upon presentation of a certified copy of the final report showing record of work completed and certificate of satisfactory deportment from the teacher in charge, may be admitted on trial to the Freshman Class without further examination. It must be understood that such assignment is made conditional upon the applicant's demonstrating his fitness to bear the responsibilities assumed. Promotions and reductions will be made in six weeks after the resumption of the regular exercises, as the individual cases may require.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present certificates from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and woodwork.

Every applicant for admission to the College must bring satisfactory testimonials as to moral character and from one or more persons qualified so to speak, his former teacher, pastor or neighbor, acquainted with his general reputation. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly-acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

Examinations and Promotions.

In order to pass from one class to the next higher class a student is required to pass an examination in each study pursued by a mark of at least sixty per cent. and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical Course will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

Scholarships.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County Examiner. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present them- "selves at the College, or other designated place, at the date which "may be named, in the September or January next following the "award, and be examined by College authorities for entrance to the "Freshman Class. Alternates are to be thus examined, as well as "principals, and in case of a failure of the principal to secure or hold "the scholarship, the alternate will have the first right to the place, if "within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to se- "cure the same, pass the entrance examination of the College, and (if "entering in January) such other examination as may be required to "join *the Freshman Class. Every one must declare his intention of* "*completing the prescribed course of study of the College, in either Agri-* "*culture or Mechanical Engineering, provided he retains his scholar-* "*ship, and must make an advance payment of $15 on the year's account.* "*And to hold a scholarship, the student must make the subsequent pay-* "*ments and meet such requirements of the College as to scholarships and* "*deportment as may be prescribed by the President and Faculty. By* "*passing special examinations, candidates for scholarship may be per-* "*mitted to enter the Sophomore Class, or by presenting satisfactory* "*certificates.*"

Experiment Station Scholarships and Fellowships.

In order to further investigations relating to agriculture or horticulture, the Experiment Station has arranged to offer scholarships not exceeding one hundred dollars in amount to students pursuing such investigations. Those competing for scholarships shall commence their investigations not later than the second term of the Junior year, the awards of scholarship to be paid on satisfactory completion of the Senior year's work. The amount of such scholarships shall be determined from time to time and depend upon the character of the work in hand.

When investigations begun under scholarships are not completed, or where further work is deemed advisable, fellowships have been established to be awarded for such time and amount as may be deemed necessary for the completion of the work, but will not exceed three hundred dollars per year. Further information may be obtained from the Director of the Experiment Station.

General Rules and Regulations.

The attention of parents is earnestly called to the following rules in force at this College: The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures of a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to each parent during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian and received by the President of the College:

"It is understood that the President of the College, as the executive of the same, and acting for the Board of Trustees, a party to this contract, has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations hereinbefore set forth."

A cadet manifesting an indifference to the observance of the rules and regulations of the institution or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so, his parents, upon notice given by the President, must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examination, is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that a failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone messages, unless the latter are very urgent.

Students will not be permitted to make contracts to sell any article to their associates without the approval of the President.

New students are particularly cautioned not to buy any article of a second-hand nature without consulting with the Commandant of Cadets or the officer in charge.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE ENDORSED BY THE FACULTY.

1. A student may not change his course of study, unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.
2. Examinations to make up conditions will be given only at times set apart by this committee. These dates will be just before the regular quarterly examinations in December, April and June; also the day before the resumption of college work in September.
3. To attain proficiency a student must make an examination grade of 60 per cent., also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent. is required.
4. A student may not be promoted if conditioned in more than one study.
5. A student may not be promoted if he has any condition of more than a year outstanding.
6. No student may be promoted from the Preparatory Department with any condition.
7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.
8. A student is subject to an oral examination at any time within ten days after a written examination.
9. An examination paper, containing erasures or showing alterations, may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.
10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.
11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students in the agricultural and general science courses must submit a schedule of elective work, to be approved by this committee, prior to the resumption of college work in September.

13. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

14. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the college seal nor the Governor's signature.

15. No student may take work in more than one class during any one term.

Student Expenses.

The expenses of the College year for the several classes of students are as follows: No reductions are made for regular vacations. No charge is made for tuition, books, or diploma.

Regular Students.

Board, heat, light and room	$150 00
*Laboratory fee	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$165 00

Scholarship Students.

Board, heat, light and room	$ 70 00
*Laboratory fee	6 00
†Physician's fee	4 00
Breakage fee	5 00
Total cost	$ 85 00

Day Students.

Room and heat	$ 24 00
*Laboratory fee	6 00
Breakage fee	5 00
Total cost	$ 35 00

Students entering College after November 1st in each year or leaving before the end of school, except when dismissed or because of illness, will be charged as follows:

Boarders at rate of	$18 00	per month.
Scholarship students	10 00	" "
Day students	3 00	" "

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*For students in Chemistry only.

†This covers only such attention as arises from ordinary sickness. It is payable on entrance, and is not refunded. Cost of consultation and trained nurses extra.

No allowance will be made for absence on account of illness of less than one month's duration, and then the rebate shall be at the rate of $14.00 per month for boarders, $7.00 per month for scholarship students and $2.00 per month for day students.

Table board is $12.00 per month; less than a month, 25 cents per meal.

Except in cases of extended illness, no money will be refunded for long-continued absence or enforced withdrawal from the College.

Students entering late in the session will be charged from the date of entrance at the rate of $18.00 per month and fees. No allowance will be made for less than one month.

Short Winter Course Students.

Board, heat, light and room	$4.00 per week

Association Fees.

The annual charges for the support of Student Associations are as follows, payable monthly in 10 installments:

Athletic Association	$4 00
Rossbourg Club	2 50

No student is compelled to affiliate with these societies; however, in case he becomes a member he is morally liable for the payment of his dues. It is therefore recommended that parents who desire their sons to have the advantages which these organizations offer, leave these sums on deposit with the College Treasurer, who will see to their proper disbursement. In this way parents may avoid the annoyance of bills from these organizations after the close of College. The accounts of all Treasurers of student organizations are audited monthly by a committee which consists of the Professors of Physics, Botany and Veterinary Science. This committee also supervises all expenditures based upon the apportionments authorized by the committees of the organizations.

Uniform.

Dress Uniform (coat, trousers and cap)	$15 75
Khaki Uniform (coat, trousers, hat and leggins)	7 75

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

Time of Payment.

For Regular Students:

$40.00 (and the fees) on entrance; $40.00 on November 15th; $40.00 on February 1st; $30.00 on April 1st.

For Scholarship Students:

$35.00 (and the fees) on entrance, and $35.00 on February 1st.

For Day Students:

$12.00 (and the fees) on entrance, and $12.00 on February 1st.

Promptness in Payment is Insisted Upon.

Explanation of Fees.

The laboratory fee is intended to cover the cost of the materials and apparatus used by the student in practical laboratory work.

The physician's fee is to provide for the attendance of the regular College physician in all ordinary cases of sickness.

The breakage fee is to cover all losses to the College caused by careless breakage or other damage to property by the students. Each loss is divided proportionately among the students, and the unused balance of each fee refunded at the close of the year. In case the loss is known to be caused by any particular student, the whole amount is charged to his account.

Articles Necessary to be Provided.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed).
3 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three-quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (shuck), cotton top (uniform).

The room-mates together purchase the following articles:

1 set of lamp fixtures (uniform).
1 pitcher and basin (uniform).
2 tablecloths (uniform).
1 broom.
1 looking-glass.
1 slop-jar (porcelain).

All the articles marked uniform in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.

The College will not be responsible for articles left in the barracks during vacations unless by special arrangement.

Student Opportunities.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference. The compensation in all cases is fixed at ten cents per hour.

Letter from Department of Agriculture.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving a compensation which will enable them to pay all expenses. This offer on the part of the Department of Agriculture is greatly appreciated, and will, no doubt, be availed of by many attending the land-grant colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:

"DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.,

"June 27, 1899.

"Dear Sir—In my annual report to the President for 1898 I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post-graduate studies in connection with work in the scientific division of this Department, as far as practicable. In pursuance of this policy I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as 'Scientific Aids,' on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support in the preparation of their graduates for posts of usefulness in this Department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope, therefore, that the effort which I am now making in this direction will be but the beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high grade scientific work. It will, of course, be understood that under present conditions the Department can only admit a very limited number of scientific aids. Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualifications for aiding in the work of the Department now in progress.

"In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission.

"Very respectfully,

"JAMES WILSON,
"Secretary of Agriculture.

"To R. W. Silvester, President, College Park, Md."

Scientific Aid, Department of Agriculture.

August 1st, 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of Scientific Aid, Department of Agriculture.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

Subjects.	Weights.
1. College Course with Bachelor's Degree	50
2. Post-graduate Course and Special Qualifications	25
3. Thesis or Other Literature	25
Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commission prior to the hour of closing business, on August 1st, 1900, their statements and other material which will be required as specified in a special form which will be furnished them by the Commission, together with application blank (Form 304), in order to have their names entered upon the register, which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to August 1st, 1900, may file them at any subsequent time, when they will be rated, and the names of those attaining eligible averages will be entered upon the register.

For the information of applicants the following statement is made, as received from the Secretary of Agriculture:

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.

2. Each applicant must file with the United States Civil Service Commission, Washington, D. C., a properly certified statement as to

the length of time spent in College, the studies pursued, the standing in these studies, the special work it is desired to take up, and the special qualifications for such work, and finally, a thesis upon such scientific subjects as the applicant may select, or, in lieu of this, any literature on scientific subjects, over his own signature.

3. The length of time any scientific aid may serve in the Department is limited to two (2) years.

4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified, without regard to any consideration, save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blanks (Form 304) and special forms.

Student Organizations.

Student clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and College pride, and developing an *esprit de corps* among the students. Each class has its own organization, in which matters relating to class work are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline, and tends to raise the standard of student honor.

Young Men's Christian Association.

G. Sturgis, President. E. R. Sasscer, Vice-President.
A. A. Parker, Secretary. H. D. Williar, Treasurer.

Most encouraging work has been done by this organization during the past year, and much interest has been shown in both the private and public meetings.

Athletic Association.

W. R. Mitchell, President. R. P. Choate, Vice-President.
J. P. Gray, Secretary. L. W. Cruikshank, Treasurer.

Literary Societies.

"NEW MERCER" LITERARY SOCIETY.

L. W. Cruikshank, President. J. A. Anderson, Vice-President.
W. R. Mitchell, Secretary and Treasurer.

"MORRILL" LITERARY SOCIETY.

E. W. Stoll, President.	H. S. Watts, Vice-President.
E. W. Merryman, Sec'y and Treas.	A. L. Pouleur, Sergeant-at-Arms.

These societies are invaluable adjuncts to College work. Through them a good knowledge of parliamentary law is gained, as well as a readiness of expression and activity in thought—qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

The Oratorical Association of Maryland Colleges.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges, in rotation, and a marked improvement is to be observed as a result of its organization.

Editorial Staff of "Reville," '04.

T. B. Mullendore, Editor-in-Chief.
H. W. Burnside, E. W. Merryman, Associate Editors.

Departmental.

Athletics, E. W. Stoll, E. R. Sasscer.
Literary, L. W. Cruikshank, R. P. Choate, W. R. Mitchell.
Humorous, E. C. Mayo, F. O. Webster.
Rossbourg Club, H. D. Watts, S. B. Shaw.
Class and Historical, J. P. Gray.

Board of Managers.

G. L. Wentworth, Business Manager.
J. A. Anderson, J. G. Ensor, J. M. Street, Associate Business Managers.

The "Reveille" is the College Annual, edited entirely by the Senior Class; it is the successor of the "Cadet's Review." Eight editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard, both of originality and expression.

Rossbourg Club.

H. D. Watts, President.	W. R. Mitchell, Vice-President.
R. P. Choate, Secretary.	E. W. Stoll, Treasurer.

The social man is a necessity—hence, this organization is encouraged and supported by the President and Faculty. The entertainments of the same have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

The Alumni Association.

The growth of the Alumni Association during the past year is a source of great satisfaction to the officers of the College, and of the Association. Through the efforts of its officers a smoker was held at the College in June, this year. Renewed interest was shown by the existing members of the Association, and the occasion was marked by a large increase in the membership.

All indications point to a great advance in the growth of the organization, and now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. By restricting the competition for the medal to be awarded by the Association for the best paper on ''Agricultural Science'' to those students pursuing original research, it is intended and hoped, by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

It will be a source of gratification to the members of the Association to note the action of the Board of Trustees of the College with reference to the holding of scholarships in the College. Four years ago the Association passed a resolution looking to the restriction of the holders of the State scholarships to the Agricultural and Mechanical courses in the College. This was with the idea of carrying out more completely the ideas of the founders of the College in establishing a school for instruction in Agriculture and the Mechanic Arts. The Board of Trustees later passed an order putting the restriction in full operation. It is along this and similar lines that the Association has a broad field provided in which to exert its efforts, and as it increases in strength it may be expected to make its influence felt for the advancement of the interest and welfare of the College. The officers of the Association for the ensuing year are: President, S. S. Buckley, '93; Vice-President, H. H. Holzapfel, '93; Secretary-Treasurer, M. N. Straughn, '99; Executive Committee, members-at-large, N. H. Gill, '97, and J. D. Cronmiller, '97.

Graduates and members of the Association are requested to keep the Secretary-Treasurer, M. N. Straughn, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates, which will enable the officers to locate and communicate with them, will facilitate their efforts and will tend to further the success of the Association.

Degrees and Medals.

Degrees Conferred 1904, with Subjects of Theses.

MASTER OF SCIENCE.

ARTHUR BROOKHOUSE FOSTER, B.S., Prince George's County, Md.
"Method for Determination of Butter Fat in Condensed Milk."

R. W. B. MAYO, A.B., Prince George's County, Md.
"A Study of Aspergillus Fumigatus."

T. B. SYMONS, B.S., Prince George's County, Md.
"Additional Investigations on the Mouth Parts of the San Jose Scale."

MECHANICAL ENGINEER.

J. A. ANDERSON, Somerset County, Md.
"Factor of Safety of Electric Railway Bridge over Paint Branch."

R. P. CHOATE, Baltimore County, Md.
"Construction and Testing of a 3 x 3 Gasoline Engine."

L. W. CRUIKSHANK, Cecil County, Md.
"Modern Foundries and Their Products."

E. C. MAYO, Prince George's County, Md.
"Turret Lathe and an Attachment for Cutting Irregular Pieces."

E. W. MERRYMAN, Baltimore County, Md.
"Annealing Processes."

W. R. MITCHELL, Charles County, Md.
"Lubricants and Lubrication—Their Value and Applications."

E. W. STOLL, Anne Arundel County, Md.
"Construction of the Cupola."

G. L. WENTWORTH, Chicago, Illinois.
"Apparatus for Determining the Heat Value of Bituminous Coal."

BACHELOR OF ARTS.

H. W. BURNSIDE, Prince George's County, Md.
"Development and Decline of the English Drama."

T. B. MULLENDORE, Baltimore County, Md.
"The Evolution and Development of the English Novel."

BACHELOR OF SCIENCE.

M. A. CALDERON, Lima, Peru.
"The Cattle Industry in Peru."

E. R. SASSCER, Charles County, Md.
"Some Scale Insects of Economic Importance in Maryland."

S. B. SHAW, Somerset County, Md.
"Comparative Results of Muriate and Sulphate of Potash on Greenhouse Tomatoes."

Certificates Awarded.

CLAY PENNINGTON WHITEFORD, JR., Harford County, Md.
JOAQUIN WALKER, Santiago, Chile.
For Completing the Two-Year Course in Agriculture.

Medals Awarded—Commencement 1904.

EDWARD COOPER MAYO,

Senior Medal; for highest standing for four years. Awarded by the President. Average for four years, 87.4.

WELLSTOOD WHITE,

Junior Medal; for highest standing for Junior year. Awarded by the President. Average for Junior year, 95.5.

ERNEST WILBUR STOLL,

Gold Medal; for best debate in competitive debate. Awarded by the Alumni Association.

GEORGE LANSING WENTWORTH,

Gold Medal; for best thesis in Mechanical Engineering Department. Awarded by the Alumni Association.

STEWART BAKER SHAW,

Gold Medal; for best essay in Agricultural science. Awarded by Alumni Association.

EDMUND COOPER MAYO,

Gold Medal; for best essay on "American Citizenship." Awarded by the Board of Trustees.

Military Department Roster.

Cadet Battalion.

COMMANDANT OF CADETS.

Field and Staff.

W. White, Major.
G. Sturgis, Lieutenant and Battalion Adjutant.
E. D. Diggs, Lieutenant and Quartermaster.

Non-Commissioned Staff.

J. J. T. Graham, Sergeant Major.
E. I. Oswald, Color Sergeant.
W. B. Harris, Quartermaster Sergeant
C. S. Ridgway, Chief Trumpeter.

Company "A."

W. R. Roberts, Captain.
J. C. Cockey, First Lieutenant.
W. H. Byron, Second Lieutenant.
R. D. Nicholls, Third Lieutenant.
H. J. Caul, First Sergeant.
L. Bassett, Sergeant.
H. D. Williar, Jr., Corporal.
A. D. Cockey, Corporal.
R. H. Dixon, Sergeant.
C. L. Lippincott, Corporal.
F. E. Linnell, Corporal.
E. P. Haslup, Corporal.

Company "B."

A. A. Parker, Captain.
————, First Lieutenant.
E. H. Snaveley, Second Lieutenant.
E. T. Hayman, Third Lieutenant.
L. F. Zerkel, First Sergeant.
R. Goodell, Sergeant.
B. H. Storm, Corporal.
H. O. Williams, Corporal.
S. P. Thomas, Sergeant.
E. S. Halloway, Corporal.
J. L. Iglehart, Corporal.
C. H. Harper, Corporal.

Company "C."

J. J. A. Krentzlin, Captain.
————, First Lieutenant.
J. W. P. Somerville, Second Lieutenant.
M. Duckett, Jr., Third Lieutenant.
G. M. Mayer, First Sergeant.
A. M. McNutt, Sergeant.
R. W. Rice, Corporal.
W. B. Fluharty, Corporal.
J. P. Mudd, Corporal.
H. H. Owings, Corporal.
G. W. Firor, Corporal.

Roster of Matriculates.

Session 1903–1904.

Graduate Students.

	POSTOFFICE.	COUNTY.
Foster, A. B.,	College Park,	Prince George.
Mayo, R. W. B.,	Hyattsville,	Prince George.
Symons, T. B.,	College Park,	Prince George.
Walls, E. P.,	Barclay,	Queen Anne.
Wharton, W. R.,	Stockton,	Worcester.

Senior Class.

Anderson, J. A.,	Deal's Island,	Somerset.
Burnside, H. W.,	Hyattsville,	Prince George.
Calderon, M. A.,	Lima,	*Peru.*
Choate, R. P.,	Randallstown,	Baltimore.
Coll, R.,	Buenos Ayres,	*Argentine Republic.*
Cruikshank, L. W.,	Cecilton,	Cecil.
Gray, J. P.,	Glyndon,	Baltimore.
Mayo, E. C.,	Hyattsville,	Prince George.
Merryman, E. W.,	Baltimore,	Baltimore City.
Mitchell, W. R.,	La Plata,	Charles.
Mullendore, T. B.,	Hagerstown,	Washington.
Sasscer, E. R.,	La Plata,	Charles.
Shaw, S. B.,	Rehoboth,	Somerset.
Stoll, E. W.,	Brooklyn Station,	Baltimore.
Watts, H. D.,	Belair,	Harford.
Wentworth, G. L.	Chicago,	*Illinois.*

Junior Class.

Brown, D. E.,	College Park,	Prince George.
Byron, W. H.,	Williamsport,	Washington.
Digges, E. D.,	Port Tobacco,	Charles.
Duckett, M.,	Hyattsville,	Prince George.
Hayman, E. T.,	Stockton,	Worcester.
Hines, T. L.,	Baltimore,	Baltimore City.
Krentzlin, J. J. A.,	Washington,	*District of Columbia.*
Mackall, J. N.,	Mackall,	Calvert.
Nicholls, R. D.,	Germantown,	Montgomery.
Parker, A. A.,	Pocomoke City,	Worcester.
Roberts, W. P.,	Landover,	Prince George.
Smith, W. T.,	Ridgely,	Caroline.
Snavely, E. H.,	Orange,	Baltimore.
Somerville, J. W.,	Cumberland,	Allegany.
Sturges, G.,	Snow Hill,	Worcester.
White, M.,	Dickerson,	Montgomery.

Sophomore Class.

Angle, W. H.,	Clear Spring,	Washington.
Bassett, L.,	Cambridge,	Dorchester.
Bay, J. H.,	Jarrettsville,	Harford.
Blair, E. A.,	Baltimore,	Baltimore City.
Caul, H. J.,	Buffalo,	*New York.*
Cockey, A. D.,	Owing's Mills,	Baltimore.
Crone, W. M.,	St. Michael's,	Talbot.
Davis, F. E.,	Hyattsville,	Prince George.
Dixon, R. H.,	Cambridge,	Dorchester.
Goodell, R.,	Frederick,	Frederick.
Graham, J. J. T.,	Ingleside,	Queen Anne.
Hunter, J. M.,	Roe,	Queen Anne.
Lippincott, C. L.,	Baltimore,	Baltimore City.
Mayer, G. M.,	Frostburg,	Allegany.
McNutt, A. M.,	Berkeley,	Harford.
Plumacher, E. H.,	Maracaibo,	*Venezuela.*
Plumacher, M. C.,	Maracaibo,	*Venezuela.*
Pyles, R. G.,	Barnesville,	Montgomery.
Ridgway, C. S.,	Beltsville,	Prince George.
*Shaffer, D. M.,	Laurel,	Prince George.
Shepherd, E. L.,	Bristol,	Anne Arundel.
Showell, J. L.,	Berlin,	Worcester.
Storm, B. H.,	Reisterstown,	Baltimore.
Tate, J ,	Washington,	*District of Columbia.*
Thomas, S. P.,	Ednor,	Montgomery.
Thompson, J. G.,	Landover,	Prince George.
Towner, L. F.,	Perryman,	Harford.
Vrooman, C. A.,	Hyattsville,	Prince George.
Waters, F.,	Washington,	*District of Columbia.*
Watts, H. F ,	Belair,	Harford.
Whiting, L. W.,	Hyattsville,	Prince George.
Williar, H. D.,	Ruxton,	Baltimore.
Wright, R. V. L.,	Williamsport,	Washington.
Wood, R. V.,	Barnesville,	Montgomery.
Zerkel, L. F.,	Luray,	*Virginia.*

Freshman Class.

Bateman, C. F.,	Luray,	*Virginia.*
Bowland, A. N.,	Kingston,	Somerset.
Brooks, J. D.,	Westminster,	Carroll.
Bryan, R. C.,	Centreville,	Queen Anne.
Bryan, W. E.,	Baltimore,	Baltimore City.
Clagett, C.,	Upper Marlboro,	Prince George.
Clark, F. P.,	Keep Tryst,	Washington.

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*Died April, '04.

Coale, J. A.,	Upper Marlboro,	Prince George.
Copeland, T. C.,	Washington,	*District of Columbia.*
Crisp, A. B.,	Brooklyn Station,	Baltimore.
Corridon, R.,	Washington,	*District of Columbia.*
Diller, C. W.,	Double Pipe Creek,	Carroll.
Firor, G. W.,	Thurmont,	Frederick.
Fluharty, W. B.,	Greensboro,	*North Carolina.*
Galt, D. B.,	Hyattsville,	Prince George.
Galt, F. S.,	Hyattsville,	Prince George.
Gill, J. V.,	Boring,	Baltimore.
Graff, T. T.,	Derwood,	Montgomery.
Groves, W. D.,	Ellicott City,	Howard.
Hall, R. H.,	Barstow,	Calvert.
Harper, C. H.,	Baltimore,	Baltimore City.
Haslup, E. P.,	Laurel,	Prince George.
Holloway, E. S.,	Rosaryville,	Prince George.
Holmead, J. H.,	Washington,	*District of Columbia.*
Halterman, E.,	Columbus,	*Ohio.*
Iglehart, J. L.,	Simpsonville,	Howard.
Jones, J. E.,	Davidsonville,	Anne Arundel.
Linnell, F. E.,	Falmouth,	*Massachusetts.*
Long, W. B.,	Westover,	Somerset.
Mackall, T. B.,	Mackall,	Calvert.
Mattingly, J. D.,	Laurel,	Prince George.
Maxwell, G. C.,	Baltimore,	Baltimore City.
McCandlish, E. G.,	Piedmont,	*West Virginia.*
McKim, D. C.,	Luray,	*Virginia.*
Merryman, N. B.,	Timonium,	Baltimore.
Milburn, C. P.,	Leonardtown,	St. Mary.
Mudd, J. P.,	Washington,	*District of Columbia.*
Owings, H. H.,	Simpsonville,	Howard.
Pyles, R. A. W.,	Camp Springs,	Prince George.
Riddick, B.,	Warren,	*Ohio.*
Robey, W. T.,	Berwyn,	Prince George.
Silvester, R. L.,	College Park,	Prince George.
Smith, C. E.,	Bowie,	Prince George.
Somerville, W. A. S.,	Cumberland,	Allegany.
Thrasher, H. C.,	Deer Park,	Garrett.
Thweat, C.,	Baltimore,	Baltimore City.
Tilson, R. J.,	Davis,	*West Virginia.*
Turner, E. M.,	Lassiter,	*Virginia.*
Vocke, S. T.,	Baltimore,	Baltimore City.
Whiting, H. R.,	Hyattsville,	Prince George.
Williams, H. O.,	Nanticoke,	Wicomico.
Zouck, J. T.,	Glyndon,	Baltimore.

Two-Year Special Students in Agriculture.

SECOND YEAR.

Gassoway, J. H., Jr.,	Germantown,	Montgomery.
Walker, J.,	Santiago,	*Chile.*
Whiteford, C. P.,	Whiteford,	Harford.

FIRST YEAR.

Albrittain, L.,	Washington,	*District of Columbia.*
Arnold, T. J., Jr.,	Beverley,	*West Virginia.*
Bennett, B. C. S.,	Stevenson,	Baltimore.
Benson, R. H.,	Grifton,	Montgomery.
Candamo, J. V.,	Lima,	*Peru.*
Cannon, C. L.,	Bridgeville,	*Delaware.*
Carroll, E. F.,	Belair,	Harford.
Friend, J. T.,	Lydia,	Washington.
Harris, W B.,	Coleman,	Kent.
Lyon, W. J.,	Hughesville,	Charles.
Oswald, E. I.,	Chewsville,	Washington.
Rice, R. W.,	Baltimore,	Baltimore City.
Street, A. D.,	Fallston,	Harford.

Special Students.

Californa, A.,	Puerto Principe,	*Cuba.*
Cockey, J. C.,	Owings Mills,	Baltimore.
Ensor, J. G ,	Philopolis,	Baltimore.
Marin, H. J.,	Puerto Principe,	*Cuba.*
Mas, J.,	Puerto Principe,	*Cuba.*
Pouleur, A. L.,	Windsor,	*Connecticut.*
Power, E.,	Derwood,	Montgomery.
Salinas, J.,	Lima,	*Peru.*
Street, J. M.,	Rocks,	Harford.
Webster, F. O.,	Baltimore,	Baltimore City.

Preparatory Class.

Ager, R. M.,	Hyattsville.	Prince George.
Allen, R. S.,	Rising Sun,	Cecil.
Beasman, F. B.,	Sykesville,	Carroll.
Carr, A., Jr.,	Hyattsville,	Prince George.
Chappelear, J. E.,	Hughesville,	Prince George.
Cooper, B. R.,	Worton,	Kent.
Delano, S. E.,	Bath,	*Maine.*
Dickey, P. S.,	Baltimore,	Baltimore City.
Hall, J. M.,	Hyattsville,	Prince George.

Hanway, M. B.,	Baltimore,	Baltimore City.
Felty, G. P.,	Connellsville,	*Pennsylvania.*
Herpeck, G. R.,	Connellsville,	*Pennsylvania.*
Hays, L.,	Barnesville,	Montgomery.
Hoen, J. M.,	Baltimore,	Baltimore City.
Kuhry, H. C.,	Moravia,	*New York.*
Linkins, E. R.,	Washington,	*District of Columbia.*
Lyddane, J. R.,	Germantown,	Montgomery.
Lockie, L. G.,	Altoona,	*Pennsylvania.*
Porter, H. L.,	Oakland,	Garrett.
Russell, B.,	Washington,	*District of Columbia.*
Sanford, J. W.,	Washington,	*District of Columbia.*
Shipley, W. G.,	College Park,	Prince George.
Southard, P. C.,	Colonial Beach,	*Virginia.*
Toadvine, G. C.,	Tyaskin,	Wicomico.
Valdes, J. M.,	Puerto Principe,	*Cuba.*
Waggner, G. M.,	Baltimore,	Baltimore City.
Walker, B. S.,	Mitchellsville,	Prince George.
Wilson, G. W.,	Simpsonville,	Howard.
Woodson, A. R.,	Washington,	*District of Columbia.*

Short Winter Course Students.

Beard, H. J.,	Feagaville,	Frederick.
Cobey, E. A.,	Grayton,	Charles.
Cohill, L. O.,	Hancock,	Washington.
Gifford, C. M.,	Rising Sun,	Cecil.
Hance, F.,	Laurel,	Prince George.
Herr, R. E.,	Boonsboro,	Washington.
Johnson, T. B.,	Elvaton,	Anne Arundel.
Lewis, S. H.,	Glendale,	Prince George.
Rhodes, C. N.,	Queen Anne,	Queen Anne.

Summary of Students.

Graduate Students	5
Senior Class	16
Junior Class	16
Sophomore Class	35
Freshman Class	52
Two-Year Students	16
Special Students	10
Preparatory Students	30
Short-Course Students	9
Total	189

List of Graduates, with Degrees and Addresses.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received:

Class of '63.

Calvert, C. B., A.B., College Park, Md.
Sands, W. B., A.B., Lake Roland Md.

Class of '64.

Franklin, J., A.B., 306 San Pedro Ave., San Antonio, Texas.
Todd, W. B., B S.

Class of '66.

Hall, E., A.B.
Roberts, L., Ph.B.

Class of '67.

Soper, F. A., A.B. (M.A. '74), Baltimore, Md.

Class of '73.

*Henry, R. S., A.B. (M.A. '75).
Miller, O., A.B. (M.A. '75).
Regester, A., A.B.
Waters, W. F., A.B.
Worthington, D., A.B.
Worthington, W., A.B.

Class of '74.

Coffren, J. H., A.B. (M.A. '77); Croome, Md.
Davis, H. M., A.B. (M.A. '77), Poolesville, Md.
Griffith, L. A., A.B. (M.A. '77), Marlboro, Md.
Hall, D., M.A.
Norwood, F. C., A.B. (M.A. '77), Frederick, Md.

Class of '75.

Gray, J. B., A.B., Prince Frederick, Md.
Hyde, J. F. B., A.B., 110-114 Hanover St., Baltimore, Md.
Lerch, C. E., B.S., 110-114 Hanover St., Baltimore, Md.
Miller, L., B.S., Albuquerque, New Mexico.

Class of '76.

Blair, W. J., B.S. (M.S.), Custom-House, Baltimore, Md.
Thomas, T., B.S., Maddox, Md.
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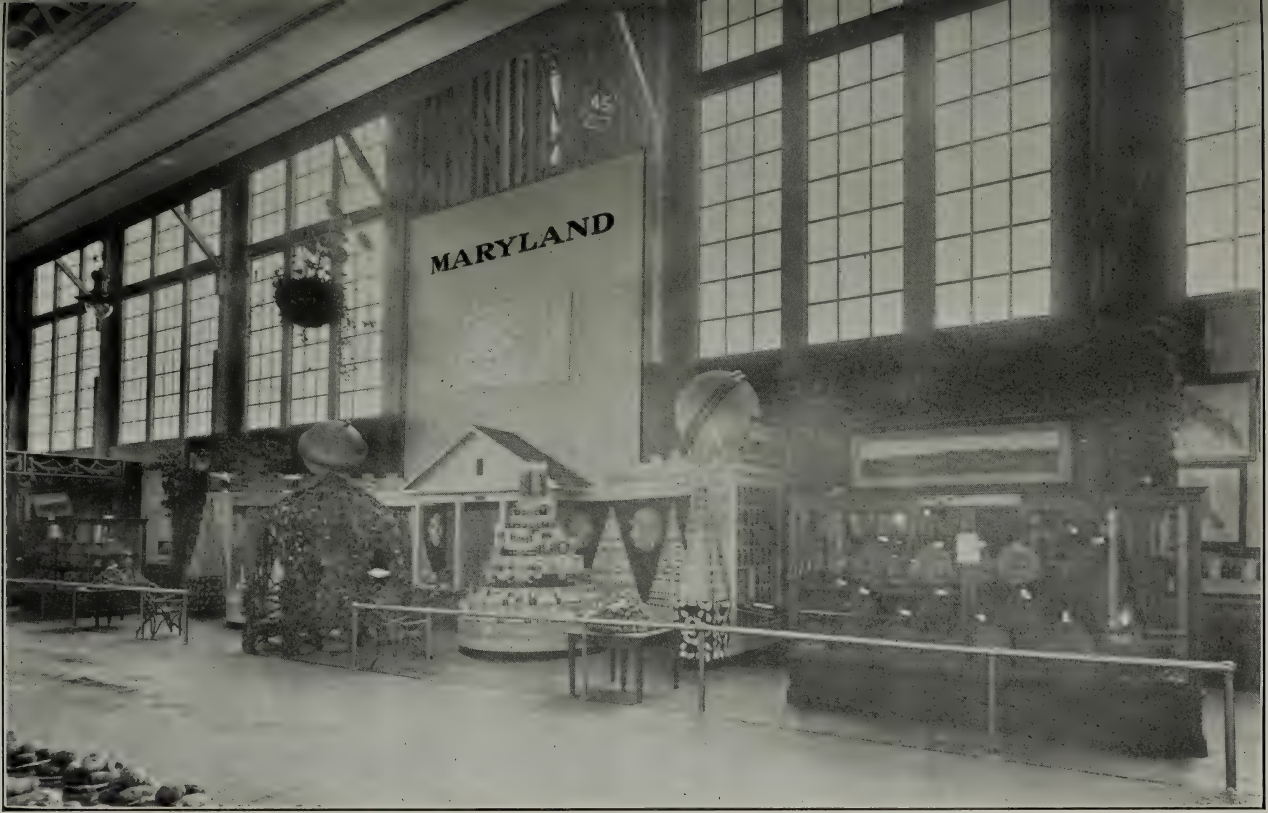

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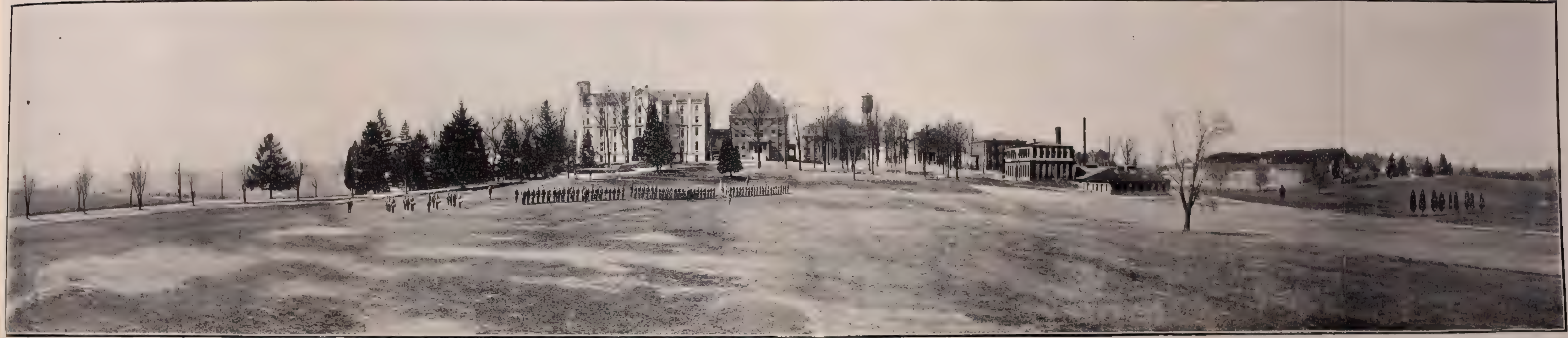

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Calendar for 1905-1906.

FIRST TERM.

September 19th and 20th—Entrance Examinations.

Thursday, September 21st, 1 P. M.—College Work Begins.

Friday, October 13th—Meeting of Board of Trustees.

Friday, December 8th—Meeting of Board of Trustees.

Thursday, December 21st, noon—First Term Ends.

Thursday, December 21st, noon, to Tuesday, January 2d, noon—Christmas Holidays.

SECOND TERM.

Tuesday, January 2d, noon—Second Term Begins.

Friday, March 9th—Meeting of Board of Trustees.

Friday, March 23d—Second Term Ends.

THIRD TERM.

Monday, March 26—Third Term Begins.

Wednesday, April 11th, noon, to Tuesday, April 17th, 1 P. M.—Easter Holidays.

June 4th to 9th—Final Examinations.

Friday, June 8th—Meeting of Board of Trustees.

Sunday, June 10th—Baccalaureate Sermon.

Monday, June 11th—Class Day.

Tuesday, June 12th—Alumni Day.

Wednesday, June 13th, 11 A. M.—Commencement Day Exercises.

Historical Sketch.

The Maryland Agricultural College was incorporated by an Act of the General Assembly of Maryland, dated March 6, 1856, at a time when but one other such institution existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public spirited private individuals, the original college building was erected, and its doors opened to students in the fall of 1859. For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part at least, a State institution and such it is at the present time.

In 1887 the Federal Congress passed a second important act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

Once more, in 1892 the Federal Government came to the aid of the agricultural and mechanical colleges. By the act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

During the last twelve years the history of the College has shown a record of steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory the mechanical engineering building (recently enlarged), Morrill Hall, the college barn, the sanitarium and the new administration building and barracks as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Entomology and Vegetable Pathology. Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

Location and Description.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington and thirty-two miles from Baltimore. At least nine trains a day from each city stop at College Station thus making the place easily accessible from all parts of the State. The telegraph station is Hyattsville connected with the College by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and onehalf miles to the south and Laurel the largest town in the county is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway. The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees and overlooking the entire surrounding country. In front extending to the turnpike is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres and is devoted to the gardens, orchards, vineyard and to general farming.

The College barracks is a five story brick building containing student quarters and the Domestic Department. The dormitories are large, well ventilated and provided with fire escapes, bath and water rooms. All the buildings are lighted with gas and electricity and heated with steam from central plants on the College grounds.

The Mechanical Engineering Department is located in a two story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex, designed to afford additional facilities in forging and foundry work, which was erected and equipped during 1904. It is a model building of its kind.

The chemical building was completed in 1897 and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned to the Professor of Chemistry at this College by an Act of the General Assembly. He is thus the State Chemist.

In 1893 the present building of the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is on the second floor and is large, well lighted and convenient for the purpose.

Among the recent additions to the Group of College buildings is Morrill Hall. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable

Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments have suffered, and greatly extending their opportunities for the development of high grade scientific work. A greenhouse for work in entomology and vegetable pathology has just been added.

The College Sanitarium, completed in 1901, has proven a most efficient means of isolating infectious diseases which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished with modern hospital facilities. An experienced nurse is in constant attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

Recent Improvements and Repairs.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated and equipments secured.

Among recent improvements are additional dormitories, accommodating twice the number of students; an auditorium and offices in the Administration Building; a complete renovation of the original College barracks; a modern steam heating plant; gas and electric lighting; lavatories; forced ventilation, etc., all of which establishes quarters and class rooms of unusually good sanitary arrangements.

General Aim and Purpose.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has prepared for it by a thorough training in the essentials. All education must be narrow and one sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described;

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year his work consists wholly of a few closely connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical workshops a student is able to become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College, is legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

Departments—Equipment and Work.

The following is a brief account of the equipment of the several departments of the College and the general character of the instruction given in each:

AGRICULTURAL DEPARTMENT.

W. T. L. Taliaferro, Professor.
E. P. Walls, Assistant.

The Agricultural Department offers four courses—(a) a four-year course, leading to the degree of B. S.; (b) a special two-year course, for proficiency in which a certificate is awarded; (c) a special creamery course; (d) a ten-week winter course.

Outline of Four-Year Course.

I. Lecture Course In Agriculture.—This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and, it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers can not fail to have an excellent effect, not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Students taking the agricultural or general science courses are required to attend these lectures. With other students attendance is optional.

II. Live Stock.—*Third Term, Sophomore Year—Seven periods per week; three theoretical, four practical.* This course is devoted to the detailed study of farm live stock, including stock judging and breeds of stock. Prof. Curtiss' "Horses, Cattle, Sheep and Swine" is used as the text book, supplemented by the "Breeders' Gazette," "Hoards' Dairyman," and other live stock jorunals and experiment station bulletins for collateral reading and reference. Practical lessons are drawn from the stock on the Experiment Station farm. The United States Cattle Quarantine Station for the port of Baltimore is but a few miles from the College, and whenever there is an importation of special merit the students are taken to the Quarantine Station to inspect and study the stock imported. Another valuable feature of this course is the taking of the students to the county fairs where the best stock is exhibited, and to private stock farms of recognized excellence, where not only the animals themselves, but also the methods of handling them, are made the subject of careful study and inspection. For this purpose this course is extended through the fair season in the fall term of the Junior year.

III. Crop Production.—*First Term, Junior Year—Ten periods per week; four theoretical, six practical.* Crop production, the study of farm crops in detail, as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation, harvesting. Morrow & Hunt's "Soils and Crops" is used as a text book. The College farm of two hundred and sixty acres furnishes opportunity for practical work.

A special feature of this course is the study of crop improvement by selection and breeding. The first breeding plot of corn in Maryland was planted on the Experiment Station farm by the College students, from seed ears selected and scored by them with assistance of the instructor in agronomy. The same system of student work is used in all corn breeding work and other crop growing experiments whenever practicable. Many students do overtime work, for which they are paid by the hour.

The practical work of this course will be continued into the spring term of the Junior year.

IV. Stock Breeding.—*First and Second Term, Junior Year—Eight periods per week; four theoretical, four practical.* The principles of stock breeding. The wonderful success which has attended the efforts of well informed and judicious breeders on the one hand, and on the other the greater number of practically worthless animals to be found in the country, clearly illustrate the need on the part of the general farmer for a more intimate knowledge of, and a closer attention to, the principles which underlie this important branch of farming. Miles' "Stock Breeding" is the text book in this course, but is reinforced by the study of the breeding and records of noted animals in all of the principal breeds.

V. Soils.—*Second Term, Junior Year—Eight periods per week; four theoretical and four practical.* The study of the physical and chemical conditions of the soil in their relation to profitable argiculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text books, laboratory and field work. The text book used is "The Soil," by Prof. King. No State in the Union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

VI. Farm Drainage.—*Third Term, Junior Year—Eight periods per week; four theoretical, four practical.* The text book used in this course is Waring's "Drainage for Profit and Health." Practical work in open ditching and under drains is provided for the students on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

VII. Fertilizers and Soil Fertility.—*First Term, Senior Year—Ten periods per week.* Text books: Voorhees' "Fertilizers," Roberts' "Fertility of the Land," and experiment station bulletins.

VIII. Dairying And Creamery Work.—*Second Term, Senior Year—Ten periods per week; theoretical and practical.* Text books; Wing's "Milk and Its Production," Russell's "A Dairy Bacteriology," Farrington & Wall's "Testing Milk."

IX. Farm Machinery.—*Third Term, Senior Year—Ten periods per week.* Lectures and practical work.

X. Farm Economics.—*Third Term, Senior Year.* Lectures.

Other work in the Senior year will be arranged on consultation with the head of the department.

Geology.

This course is required in the Agricultural and General [Science Courses. Attention is chiefly given to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text book work, lectures and field excursions.. Shaler's "First Book in Geology' is used as a text book. The reports of the Maryland Geological Survey are used for reference.

DEPARTMENT OF MECHANICAL ENGINEERING.

J. Hanson Mitchell, Professor,
J. C. Blandford, Assistant,
E. F. Garner, Assistant.

This department offers a course to those who desire to prepare themselves to design and construct machinery and superintend enigneering establishments. With this end in view is offered an education based on mechanics, drawing, mathematics, physics and modern languages, together with a practical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department and the hours allotted to each, will be found in the "Outline of Courses.

Equipment.—The Mechanical Engineering Laboratories consist of a two story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and two lecture rooms; a one story brick building, in which is the forge shop and foundry, and an annex, 25 feet by 50 feet, containing two 60-horse-power boilers, which furnish steam for power, heat and experimental purposes.

The wood working shop contains accommodations for students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grindstone.

In the forge shops are sixteen power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths' tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour; a brass furnace, one Mellett core oven, and with the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 20-inch Fifield engine lathe, with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine lathes, one 24-inch Gray planer, one 16-inch Smith and Mills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

An 8 by 12-inch engine drives the machinery of the wood-working and machine shops. It was presented to the College by the City of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy. A 10-horse-power Fairbanks gasolene engine drives the blowers in the foundry and forge shops.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue print facilities.

Tours of Inspection.—The members of the Senior Class go to Baltimore or Washington for the purpose of inspecting well known manufacturing plants.

I Mechanical Drawing.—*Three Terms, Freshman Year—Six periods per week.* Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being closed in covers properly titled by the student. Text-book, Rouillion's "Mechanical Drawing."

II. Technical Instruction.—*First Term, Freshman Year—Five periods per week.* Explanation of the reading of mechanical drawings. The proper cutting angles, care and adjustment of carpenter tools. Relative strength of wood joints. Wood; its shrinking and warping, and how to correct and prevent. Text, Goss' "Bench-work in Wood." Drill in problems in Arithmetic, Algebra and Drawing, by notes and lectures.

III. Shop Work.—*Three Terms, Freshman Year—Six periods pe week.* Use and care of carpenter tools; exercises in sawing, mortising, tenoning and laying out work from drawings, wood turning and pattern making.

IV. Mechanical Drawing.—*Three Terms, Sophomore Year—Six periods per week first term; four the second; five the third.* Free hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading. Text-book, Rouillion's "Mechanical Drawing."

V. Elementary Applied Mechanics.—*First Term Sophomore Year—Four periods per week.* Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting and bending movements of beams. Jamieson's "Applied Mechanics" is the text used.

VI. Blacksmithing.—*Three Terms, Sophomore Year—Six periods per week.* The elementary operations of drawing out, upsetting, bending and welding of iron, and making and tempering of steel tools; moulding and casting in iron, and the management of the cupola.

VII. Descriptive Geometry.—*Second and Third Terms, Sophomore Year—Three periods per week second term; two periods the third.* Its relation to mechanical drawing, and the solution of problems relating to magnitudes in space, bearing directly upon those principally used by the mechanical engineer. Text-book, Fauce's "Descriptive Geometry."

VIII. Elementary Machine Design.—*Three Terms, Junior Year—Six Periods per week.* The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Reid's "Engineering, Drawing and Design" is the text used.

IX. Shop Work.—*Three Terms, Junior Year—Six periods per week.* Elementary principles of vise and macine work, which includes turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

X. Steam Engines and Boilers.—*First Term, Junior Year—Four periods per week* The principles of steam and the steam engine; the slide valve and valve diagrams; the indicator and its diagram; steam boilers, the various types and their advantages, including the method of construction. Text used is Jamieson's "Steam and Steam Engines."

XI. Power Plants.—*Second Term, Senior Year—Two Periods per week.*—Lectures on the location, construction, equipment and engineering of power plants.

XII. Machine Design.—*Three Terms, Senior Year—Four periods per week first term, six the second and four the third.* The calculation and design of pipes, belt and tooth-gearing, beams and cranes. Text, Low & Bevis' "Machine Drawing and Design."

XIII. Shop Work.—*Three Terms, Senior Year—Eight periods per week first term, ten periods second and third terms.*—Advanced machine work; the laying out, assembling and construction of some piece of machinery, such as an engine lathe or dynamo.

XIV. Testing.—*Third Term, Senior Year—Six periods per week.* A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam guages, slide valve setting and indicator practice, the slide rule, and determining the amount of moisture in steam.

DEPARTMENT OF MATHEMATICS.

R. W. Silvester, Professor,
Henry T. Harrison, Assistant.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in Mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, book-keeping is taught every student, No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

I. Elementary Mathematics.—*First Term, Freshman Year—Three periods per week.* General review.

II. Algebra.—*Three Terms, Freshman Year—Five periods per week.* Text book, Wentworth's College Algebra.

III. Plane Geometry.—*Third Term, Freshman Year; First Term, Sophomore Year—Five periods per week.* Text book, Wentworth's Plane Geometry.

IV. Solid Geometery.—*Second Term, Sophomore Year—Five periods per week.* Text book, Wentworth's Solid Geometry.

V. Trigonometry.—*Third Term, Sophomore Year—Five periods per week.* Text book, Wentworth's Plane Trigonometry.

VI. Analytical Geometry.—*First Term, Junior Year—Five periods per week.* Text book, Wentworth's Analytics.

VII. Differential Calculus.—*Second Term, Junior Year—Five periods per week.* Text book, Osborne's.

VIII. Integral Calculus.—*Third Term, Junior Year—Five periods per week.* Text book, Osborne's.

DEPARTMENT OF ENGLISH AND CIVICS.

F. B. Bomberger, Professor.
Charles S. Richardson, Assistant.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. Clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature, English and American, theoretical and practical rhetoric, logic, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first two years are devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

English Courses.

I. Language and Composition.—*Three Terms, Freshman Year —All students—Five periods per week.* English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Texts used, Lockwood's "Lessons in English," Buehler's "Exercises in English" and Swinton's "Word Analysis." Work in composition consists of the preparation of twelve themes as follows;

First Term —1. Why I Came to the Maryland Agricultural College.
2. How to Do Something—Hunt, Fish., etc.
3. How to Make Something.
4. My Favorite Book.
5. A Description of Some Place or Thing.
Second Term—6. A Character Sketch.
7. A Personal Experience.
8. Account of Some Contest.
9. An Essay—Abstract Subject.
Third Term —10. An Essay—Public Question.
11. An Argument.
12. An Oration.

II. American Literature.—*Third Term, Freshman Year—All Students—Three periods per week.* A study of the most prominent writers, with a view to giving the student an exact knowledge of their works. Text used, Watkins' "American Literature."

III. Rhetoric and Composition.—*First and Second Terms, Sophomore Year—All Students—Four periods per week.* Principles and practice of rhetoric and composition. Text used, Lockwood and Emerson's "Composition and Rhetoric."

Work in Rhetoric consists of a study of the Principles of Diction, the Sentence, the Paragraph, the Discourse, Forms of Prose, and the Nature, Form and Structure of Poetry.

Work in Composition consists of twelve themes, as follows:

First Term —1. Description of a Place.
2. Description of a Person.
3. Narration of Some Personal Experience.
4. Narration of Imaginative Experience.
5. Criticism of Some Book.
6. An Expression of Opinion.
Second Term —7. An Essay.
8. An Argument.
9. Criticism of Some Book.
10. An Oration.
11. A Descriptive Narration.
12. An Argumentative Oration.

IV. English Literature.—*Third Term, Sophomore Year—All students—Three periods per week.* Study of the History and Chief Writers of English Literature. Text used, Stopford Brooke's "English Literature."

V. Composition.—*Three Terms, Junior Year—All students—One period per week.* Practice in English Composition. Special lectures. Work in composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the third term.

VI. English Literature.—*First Term, Junior Year—Classical students only—Five periods per week.* Text books, lectures, reading, composition. Texts used, Pancoast's "English Literature," Halleck's "English Literature," and Taine's "English Literature."

VII. American Literature.—*Second Term, Junior Year—Classical students only—Five periods per week.* Text book, lectures, reading, composition. Text used, Pattee's "American Literature."

VIII. Logic.—*Third Term, Junior Year—Classical students only—Five periods per week.* Principles and practice of logic. Text used, Jevon's-Hills "Logic."

IX. English Classics.—*Three Terms, Senior Year—Classical students only—Four periods per week.* Critical study of English classics, following the outline for college entrance requirements in English.

X. Psychology.—*First and Second Terms, Senior Year—Classical students only—Four periods per week.* Principles of Psychology. Text book and lectures. Text used, Dewey's "Psychology."

XI. Literary Criticism.—*Third Term, Senior Year—Classical students only—Four periods per week.* Text and lectures. Text used, Winchester's "Principles of Literary Criticism."

XII. Composition.—*Three Terms, Senior Year—All students—One period per week.* Advanced work in English Composition. Special lectures. Ten themes illustrating special processes.

History and Civics Courses.

I. Ancient History. *First and Second Terms, Freshman Year—All students—Four periods per week.* Outlines of Ancient History. Text book and lectures. Text used, Myers "Ancient History."

II. English History.—*Third Term, Freshman Year—All students—Three periods per week.* Study of Outlines of English History. Text used, Montgomery's "English History."

III. Political Science.—*First Term, Junior Year—Classical students only—Five periods per week.* Government; special lectures on Constitution of Maryland. Text books used, Wilson's "The State," and Bryce's "American Commonwealth."

IV. American Government.—*Second and Third Terms, Junior Year—Classical, Scientific and Mechanical students—Three periods per week.* Civil Government in the United States. Text books used, Fiske's "Civil Government," Hinsdale's "American Government," and Clark's "Outlines of Civics."

V. Business Law.—*First Term, Senior Year—Classical students only—Three periods per week.* Lectures on "Business Law" as used in everyday life. Text used, Parsons' "Commercial Law."

VI. Political Economy.—*Second and Third Terms, Senior Year—Classical and Mechanical students—Four periods per week.* Principles of Political Economy and Industrial Development of the United States, Economic Science and Current Problems. Text used, Walker's "Political Economy."

DEPARTMENT OF CHEMISTRY.

Dr. H. B. McDonnell, Professor.
J. J. Morgan, Assistant.

This department is charged with two distinct classes of work; (1), the State fertilizer and food control, and (2), the instruction of students. The State work necessitates the publication of the "Quarterly," which is usually made up of the results of analysis of fertilizers and feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of this work, the assistants invariably being college graduates.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room with first class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and materials are provided from the supply room, as needed.

The department is provided with a small but well selected library of standard referencce books on chemistry to which additions are made from time to time.

Instruction in chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals; the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry which is essential in the education of every man, no difference what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Chemistry becomes an elective study in the Junior year, when an advanced course in general chemistry is given, together with qualitative analysis, quantitative analysis, mineralogy and chemical technology. Four hours per week are devoted to the lecture room, and from twelve to fifteen hours to laboratory work.

During the Senior year the work consists of organic chemistry and agricultural chemical analysis including analysis of fertilizers, feeding stuffs, water, etc., and a short course in assaying. The work of the last term consists, mainly, in the preparation of a thesis involving original work.

The object of the full chemistry course is to prepare the graduate for positions in agricultural colleges, experiment stations, the United States Department of Agriculture or in various industries that require the services of analytical chemists. The demand for our graduates for such positions is far in excess of the supply.

I. **General Chemistry.**—*Sophomore Year—Four periods per week.* Lectures and recitations. Text-book, Remsen's "Introduction to the Study of Chemistry."

II. **General Chemistry.**—*Sophomore Year—Three periods per week for the first and third terms; four for the second term.* Practical course in Chemistry to accompany I. The students perform the experiments.

III. **Advanced Chemistry.**—*Junior Year—Three or four periods per week.* Text-book, Remsen's "Advanced Chemistry."

IV. **Qualitative Analysis.**—*First Term, Junior Year—Lectures, two periods per week; practical work, twelve periods per week.* Text-book, Mason's "Qualitative Analysis."

V. **Mineralogy.**—*Second Term, Junior Year—Lectures, two periods per week; practical work, four periods per week.* Brush's "Determinative Mineralogy."

VI. Quantitative Analysis.—*Second Term, Junior Year—Six periods per week, mostly practical work.* Quantitative Analysis begun; determination of water, iron, magnesium, calcium, the common acids, etc. Reference book, Fresenius' "Manual of Assaying."

VII. Assaying.—*Third Term, Junior Year—Four periods per week.* Reference book, Brown's "Manual of Assaying."

VIII. Volumetric Analysis.—*Third Term, Junior Year—Eight periods per week, mostly practical.* Reference books Fresenius, "Quantitative Analysis" and Sutton's Volumetric Analysis."

IX. Organic Chemistry.—*Senior Year—Four periods per week.* Lectures and recitations. Reference book, Remsen's.

X Organic Preparations.—*First and Second Terms, Senior Year—Four periods per week.*

XI. Agricultural Chemical Analysis—*First and Second Terms, Senior Year—Eight periods per week.* Text-book, "Methods of Analysis of the Association of Official Agricultural Chemists."

XII. *Third Term, Senior Year—About twelve to eighteen periods per week.* This course is the preparation of a thesis involving original research in some branch of Agricultural or Industrial Chemistry.

Post-Graduate Work.—The department will arrange advanced courses in Agricultural Chemistry for graduate students.

DEPARTMENT OF PHYSICS.

Henry Lanahan, Professor.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

I. Elementary Physics.—*First and Second Terms, Sophomore Year—Two periods per week.* The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied. Text, Carhart & Chute's "High School Physics."

II. Physics.—*Three Terms, Junior Year—Four Periods per week class-room work, and four periods per week laboratory work.* The course begins with a review of mechanics, after which heat, sound, electricity and magnetism and light are taken up successively, by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurement. Written reports of the work done in the laboratory are required weekly. The text-books used are Ames' "Theory of Physics," and Ames and Bliss' "Manual Experiments in Physics."

More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF CIVIL ENGINEERING.

HENRY LANAHAN, Professor.

The subjects included in the Civil Engineering course will be found in the Outline of Courses pages———; where the course is listed as a branch of the Scientific course. The curriculum includes studies of cultural value, the fundamental sciences which form the basis of engineering, and work of a technical character. The technical subjects are as follows: applied mechanics; surveying; drafting; structural designing, including roofs and bridges; mechanics of materials; hydraulics; highway and railway engineering. The course offers a young man an opportunity to obtain a preliminary training in civil engineering that will enable him to enter practical engineering work in the field or in the drafting room with the assurance that he has the neccessary preparation to profit by the experience thus afforded; or if he desires to pursue a more extended course at a technical school of higher grade, he will be entitled to advanced standing. The instruction in applied mechanics, drawing, graphic statics and structural designing is given in the Mechanical Engineering Department. Students who have found themselves deficient in ability to learn mathematics are advised not to enter an engineering course. Upon the satisfactory completion of the Civil Engineering course the degree conferred is that of Bachelor of Science, the name of the course being specified in the diploma.

I. Surveying.—*Three Terms, Junior Year—Two periods per week class-room work; three periods per week field practice.* The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; the dividing of land; the theory of the stadia; true meridian lines; leveling; topographical surveying; railroad curves and cross-sectioning. The department is equipped with two surveyor's compasses, a Gurley transit, with solar attachment, and a 20-inch Gurley level. Texts, Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual."

II. Drawing.—*Junior Year, First Term—Six periods per week, Second and Third Terms—Four periods per week.* Practice in free-hand lettering, maps, profiles, topography, etc.

III. Graphic Statics—*First Term, Senior Year—Four periods per week.* Including the theory and practice of the graphical methods of determining stresses in frame structures, particularly roof trusses, and bending movements and shears in beams. The course is based on Hoskins' "Graphic Statics," and many of the problems are solved analytically as well as graphically.

IV. Structural Designing—*Including roofs and bridges. Second and Third Term, Senior Year—Six periods per week.*

V. Strength of Materials.—*First Term, Senior Year—Four periods per week.* Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns and shafts. The text used is Merriman's "Mechanics of Materials," and a knowledge of integral calculus is required for entrance to the course.

VI. Hydraulics.—*Second Term, Senior Year—Three periods per week.* Text-book, Merriman's Hydraulics.

VII. Railway Engineering.—*First Term, Senior Year—Two periods per week class-room work, eight periods per week field-practice* Preliminary and location surveys, cross-sectioning, calculation of quantities, etc. Searles' "Field Engineering."

VIII. Highway Engineering—*Third Term, Senior Year—Three periods per week.* Location, construction and maintenance of roads. Text, Spalding's "Roads and Pavements," and the reports of the Highway Division of the Maryland Geological Survey.

IX. Practical Problems in Surveying and Engineering.—*Senior Year—Second Term, eight periods per week, Third Term twelve periods per week.*—In 1904-05 the work was as follows:—Location of a spur track from the B. & O. R. R., to the college; Design of a drainage system for agricultural purposes for a portion of the college farm; location of a true meridian line by several methods.

DEPARTMENT OF HORTICULTURE.

W. N. Hutt, Professor,
S. P. Shaw, Assistant.

I. Principles of Plant Culture.—*Second Term, Sophomore Year—Six periods per week* Lecturers and practical work.

A discussion of elementary horticulture; the plant, its germination and growth; the tree from root to fruit; the underlying principles of plant culture. Instruction and practice are given in the propagation of plants by budding, grafting, layering and by cuttings: Text-book, Principles of Plant Culture—Goff.

II. Pomology (Fruit Growing).—*First Term, Junior Year—Four periods per week.* Text-book and lectures. A discussion of the principles underlying the growing of orchard fruits. The work begins with the origin of our cultivated fruits and the practical methods of propogating them. Next follows the study of locations for orchards and the planting of trees. General care and cultivation and the use of cover crops are taken up. Special lectures and practice are given in the proper pruning of all classes of fruits. In the College nursery, the students will propagate all classes of nursery stock. The trees propagated become the property of the students. Text-book: "The Principles of Fruit Growing"—Bailey. Reference: American Fruit Culturist—Thomas.

III. Floriculture.—*Second Term, Junior Year—Six periods per week.* Lectures and practical work. The construction and management of greenhouse structures. Instruction is given in the making of soils and in the propagation of foliage and flowering plants. Students are given practice in the various operations of commercial floriculture. They are required to name and propagate all varieties of plants in the College conservatories, the plants so produced becoming the property of the student. Text-book: Practical Floriculture—Henderson. Reference: The Nursery Book—Bailey, Greenhouse Management—Taft, Greenhouse Construction—Taft.

IV. Small Fruit Culture.—*Third Term, Junior Year—Four periods per week.* Lectures and practice in the propagation, planting, care and working of small fruits. Text-book: Bush Fruits—Card.

V. Olericulture (Vegetable Gardening).—*Third Term, Junior Year—Five periods per week.* The origin, history and botanical relations of garden vegetables. From an economic point of view, a careful study is made of the location of gardens and truck farms, the requisites of soil, fertilizers and general cultivation. Study will be made of special truck crops for market and for canning purposes. Instructions will be given in the forcing of early and tender vegetables and in the making and management of hot beds and cold frames. Text-book: Vegetable Gardening—Green. Reference: Truck Farming in the South—Oemler, Vegetable Gardening in the South—Rolfs.

VI. Fruit Harvesting, Storing and Marketing.—*First Term, Senior Year.* A discussion of the profitable marketing of fruit products. How to pick, pack and grade fruits for domestic and foreign markets. A discussion of market methods, the middle-man, pools and shipping associations. Refrigerator cars and cold storage of fruits. The utilization of waste and by-products. Text-book: Fruit, Harvesting, Marketing—Waugh.

VII. Forestry.—*Second Term, Senior Yerr—Three periods per week.* The study of trees under forest conditions. Methods of forestry, propagation and management. Wind breaks, shelter belts and forestry plantations. Trees in relation to water supply. Practical farm forestry. The government forestry policy in relation to irrigation, ranges, mines and timber supplies. Text-book: First Book of Forestry—Roth. Primer of Forestry—Pinchot.

VIII. Plant-Breeding.—*Second Term, Senior Year—Three periods per week.* The underlying principles of plant improvement by breeding. The effect of favorable culture and environment in producing beneficial variations. The fixing of characteristics by selection, crossing and hybridization. Students will be given practice in the greenhouses and College orchards in the production of new and useful varieties. Text-book: Plant-Breeding—Bailey.

IX. Landscape Gardening.—*Third Term, Senior Year—Two hours per week.* The study of the principles of ornamental gardening; planning of lawns and grounds; making of lawns, laying out of walks and drives; use of ornamental trees and flowering shrubs. The designing of beds and borders; grouping of shrubbery; use of bulbous plants and hardy herbaceous perennials; beautifying of home grounds. Students on the completion of this course must be familiar with all the trees, shrubs and plants used on the college lawns and campus. Text-book: Principles of Landscape Gardening—Waugh.

X. Special Research Work.—*Three Terms, Senior Year.* Time, subject and work to be arranged with each student individually. This work is given the student to test his power of thought and initiative along the line of Horticultural work.

DEPARTMENT OF VETERINARY SCIENCE.

SAMUEL S. BUCKLEY, Professor.

I. Microscopy.—*First Term, Sophomore Year—For students in agricultural and scientific courses—Four periods per week.* Laboratory exercises. The study of simple, compound and dissecting microscopes. Laboratory methods and microscopical technique. This course is designed to equip students for the more technical work in advanced courses.

II. Bacteriology.—*Second Term, Sophomore Year—For students in agricultural and scientific courses—Five periods per week.* Lectures and laboratory exercises. The study of bacteria, methods of propagation. Culture media, mounting and staining specimens. Disinfection, sterilization, pasteurization, etc.

III. Bacteriology.—*Third Term, Sophomore Year—For students in scientific and regular agricultural courses—Five periods per week.* Lectures and laboratory exercises. Completion of course in bacteriology as outlined in II.

IV. Comparative Anatomy and Physiology.—*First Term, Junior Year—For students in biological-scientific course—Six periods per week.* Lectures and laboratory exercises. The comparative anatomy and physiology of the domesticated animals, with special reference to the processes of nutrition.

V. Comparative Anatomy and Physiology.—*Third Term, Junior Year—For students in biological, scientific and regular agricultural courses—Six periods per week.* Lectures and laboratory exersises.

VI. Veterinary Science.—*Senior Year.* For students of the agricultural course, this is a required study throughout the year. It embraces nursing, emergency treatment, administration of medicines, means of restraint, the common diseases, and general care and management of the domesticated animals.

Short Veterinary Courses.—Students in the Short Winter Course in Agriculture are required to attend the twenty lectures given on veterinary subjects and to examine patients in the stables. Students of the two-year agricultural course receive during the first year one lecture and four practical periods per week for the first term; two lectures and six practical periods per week for the second term. During the second year they receive two lectures and four practical periods per week for the three terms. The character of the work is such as to enable a stock owner to care for animals in health and disease in an intelligent manner, to appreciate symptoms of disease, and to treat the commoner disorders and diseases of the domesticated animals.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

T. B. Symons, Professor.

A. B. Gahan, Assistant.

The instruction in this department is given by means of lectures, laboratory practice and field work. In the lectures the more general questions are discussed, with a view of giving the students as broad a knowledge of the subject as practicable in the time devoted to it. In the laboratory, attention is given to methods of investigation, insect anatomy, and preparation and classification of collections made in the field. The work of this department is open only to Juniors and Seniors in the Agricultural, Chemical and General Science courses, unless by special arrangement.

I. Zoology.—*First and Second Terms, Junior Year—Six periods per week; lectures and laboratory exercises.* This course involves a study of representatives of the principal groups of animals, together with lectures on their structure and classification.

II. Entomology.—*Third Term, Junior Year—General Course—Eight periods per week.* Lectures and laboratoy exercises. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders, and the more important families; the habits and life history of insects, with special reference to those species that are of economic importance. The laboratory and field work includes the study of the more general features of insect anatomy, the determination of common species, and the collection and preservation of insects.

III. Entomology.—*Senior Year.* Advanced course. Open only to students who have completed I and II or their equivalents. This course consists of special work in morphology or classification, or working out the life history of insects. Students making entomology their major will be required to devote at least ten hours per week, throughout the year, to this course, and prepare an original thesis upon the subject chosen or assigned.

DEPARTMENT OF BOTANY AND VEGETABLE PATHOLOGY.

J. B. S. Norton, Professor.

Frederick H Blodgett, Assistant.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture, for since plants in the field and garden are the subjects dealt with, the study of plant life must be one of the fundamental sciences on which such work is based. No course can be taken unless those preceding it or their equivalent have been pursued.

The equipment and means of illustration and demonstration consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants, microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

I. Elementary Botany.—*Third Term, Freshman Year—Two theoretical and four practical periods per week.* Laboratory and field work, with supplementary reading, using principally Leavitt's "Outlines of Botany," or Bergen's "Foundations of Botany," and taking up the fundamental facts regarding structure and elementary physiology of the common plants with a systematic study of the spring flora. Each student begins a collection of plant specimens to illustrate a subject in which he is specially interested.

II. Ecology.—*First Term, Sophomore Year—Two theoretical and four practical periods per week.* The work of Course I is continued with the wild and cultivated fall plants, and special attention given to the associations of plants and their relations to environment, light, water, soil, etc. In connection with these exercises the reproductive organs of plants and their work is studied. Suitable literature for reading is used to supplement the field and laboratory work.

III. Morphology and Life Histories of Plants.—*Second Term, Junior Year—Three theoretical and three practical periods per week in the Agricultural Course; three theoretical and four practical in the Biological Course.* A comparative study of the structure and life histories of principal types of plants from the lowest to the highest is pursued, special attention being given to those groups of plants of particular economic interest. The exercises consist of lectures and microscopic work in the laboratory. In addition a series of lectures on economic plants is given, in which the structure, geographical distribution, classification and uses of the principal economic plants, including food plants, grasses, timber, fruits, weeds, poisonous plants, parasitic fungi, etc., is studied.

IV. Plant Physiology.—*First Term, Senior Year—Two lectures and a minimum of eight periods of experimental laboratory work.* This course may be eleeted as a minor.

V. Plant Pathology.—*Second Term, Senior Year—Two lectures and a minimum of eight periods of laboratory and field work per week.* This course embraces a study of the causes, symptoms and means of control of plant diseases. It may be elected as a minor following Course IV, or the two courses may be pursued together.

VI. Original Research.—*Third Term, Senior Year.* The student's time during this term is spent in completing a thesis on some botanical subject on which he has done original work during the year.

Courses in Dendrology, Economic Plant Histology, Special Systematic Work or Studies relating to Plant Breeding, may be arranged for those who wish, to take the places of Courses IV and V.

Senior students selecting Botany as a major study must have had I to IV inclusive, or their equivalents. An outline of the work and hours will be arranged upon consultation with the Professor in charge.

Advanced Work.—Courses in advanced work in Botany and Plant Pathology will be open to all students who have completed the six undergraduate courses or their equivalents. This work is designed for students who wish to specialize in Botany or in Plant Pathology. An outline of the courses and subjects for original investigation will be arranged upon consultation with the Professor in charge. Students specializing in the above courses may often gain further knowledge by assisting in the work of the department. Special attention is given to students wishing practice in the treatment of plant diseases.

DEPARTMENT OF LANGUAGES.

Thomas H. Spence, Professor.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German; only students of the *Classical Course are required to take Latin. Students in the General Science Course may elect to take Latin in the Freshman and Senior year.

The course of study in Latin is given with two ends in view—first, to train the growing mind into accurate and close methods of reasoning; second, to give the student more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin syntax and idioms. The translation work of the course consists of selections from Sallust, Virgil, Cicero, Horace, Caesar, Ovid, Livy, Juvenal, Tacitus and Terence.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given, therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, as a rule, there is no English version of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the especial line of work which he may be pursuing. The study of French is offered as an option in the Senior year.

Latin Courses.

I. Grammar and Composition.—*Three Terms, Freshman Year.* For students of the Scientific course who elect Latin in place of History. Text-books, Gildersleeve's "New Latin Primer," Collar and Daniell's "First Year Latin," or Bingham's Latin Grammar.

The aim of this course is to give the student a familiarity with Latin forms and terminations, and enable him to read simple Latin prose.

II. Translation and Composition.—*First Term, Junior Year—Six periods per week.* Text-books, Allen and Greenough's "Cicero," Daniell's "Latin Prose Composition."

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*The Classical Course, established in 1893, was abolished in 1904. Instruction leading to the degree of B. A. is therefore, offered only to students of the Junior and Senior Years.

III. Translation and Prosody.—*Second Term, Junior Year—Six periods per week.* Text-books, MacLeane's "Horace."

IV, Translation and Composition.—*Third Term, Junior Year—Six periods per week.* Text-book, Chase and Stuart's "Tacitus." Latin Prose Composition based on text read.

V. Translation and Composition.—*First Term, Senior Year—Six periods per week.* Text-book, Chase and Stuart's "Livy." Latin Prose Composition based on text read.

VI. Translation.—*Second Term, Senior Year—Six periods per week.* Text-book, West's "Terence." Lectures on Latin Grama.

VII. Translation.—*Third Term, Senior Year—Six periods per week.* Text-book, MacLeane's "Juvenal." In this course an essay on "Roman Morals" or some like subject written in Latin is a part of the required work.

German Courses.

I. Grammar and Conversation.—*Third Term, Sophomore Year—Six periods per week.* Text-book, Otis' "Elementary German."

II. Translation.—*First Term, Junior Year—Three periods per week.* Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche,"Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrop's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

III. Translation.—*Second Term, Junior Year—Three periods per week.* Continuation of Course II.

IV. Translation.—*Third Term, Junior year—Three periods per week.* Conclusion of Course III.

V. Translation of Scientific German.—*First Term, Senior Year—Four periods per week.* Selected readings from various texts and periodicals.

VI. Translation of Scientific German.— *Second Term, Senior Year—Four periods per week.* Conclusion of Course V.

French Courses.

I. Grammar and Composition.—*First Term, Senior Year—Five periods per week.* Text-book, Whitney's French Grammar.

II. Translation.—*Second Term, Senior Year—Five periods per week.* Text-books, Super's French Reader, Rougemont's "La France," Fenelon's "Telmaque," Herdler's "Scientific French Reader," including French scientific periodicals.

III. Translation.—*Third Term, Senior Year—Five periods per week.* Conclusion of Course II.

MILITARY DEPARTMENT.

———— Commandant.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battallion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

Discipline.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent, and his parents or guardian must at once remove him from the College.

Military Promotions.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class. These officers are required to serve for the year, performing all duties imposed by the regulations of the College as a part of their regular course of training. Their conduct as officers will be rated as a study, having a value of five (5) theoretical periods per week, and a quarterly grade will be given. Failure to perform such duties shall constitute a deficiency, causing forfeiture of both diploma and commission. All members of the Senior Class will be required to perform these duties. All Seniors with quarters in barracks will be required to drill either as officers or privates. Sergeants are selected from the Junior Class, and corporals from the Sophomore Class. Exceptions will be made to this order, only when the number of men in any one class qualified for promotion is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain actor.

Uniform.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

DEPARTMENT OF PUBLIC SPEAKING.

Charles S. Richardson, Professor.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

I. *First Term, Freshman Year—One period per week.* Articulation, accent, modulation, force and elocutionary pause; expressive management of the body, attitude, and motion. Selections of poetry and prose are read and declaimed by students.

II. *Second Term, Freshman Year—Two periods per week.* Simple lectures on orators and oratory. Methods of analysis and subjects for oration. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

III. *First Term, Sophomore Year—One period per week.* A review of all work of Freshman Classes. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc.). Lectures on ancient and modern orators, with readings and declamations by students from orations.

IV. *Second Term, Sophomore Year—Two periods per week.* Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day (tariff, currency, territorial expansion, trades unions, trusts, Isthmian Canal, etc.). Lectures on parliamentary law.

PREPARATORY DEPARTMENT.

HENRY T. HARRISON. Principal.
CHARLES S. RICHARDSON, Assistant.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

I. **Arithmetic.**—*First and Second Terms—Ten periods per week.* Wentworth's Grammar School Arithmetic, completed.

II. **Arithmetic.**—*Third Term—Five periods per week.* Advanced work.

III. **Algebra.**—*Three Terms—Five periods per week.* Wentworth's Algebra, as far as quadratics.

IV. **History.**—*Three Terms—Five periods per week.* United States History, completed.

V. **Geography.**—*First Term—Five periods per week.* Descriptive Geography, completed.

VI. **Geography.**—*Second and Third Terms—Five periods per week.* Maury's Physical Geography, completed.

VII. **English.**—*Three Terms—Eight periods per week.* Spelling, technical grammar, parsing and analysis, composition, letter-writing and elocution.

DEPARTMENT OF PHYSICAL CULTURE.

CHARLES S. RICHARDSON, Director.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastics and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years. Three periods per week, Preparatory, Freshman and Sophomore years.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

THE COLLEGE LIBRARY.

F. B. BOMBERGER, Librarian.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a large number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

Donations to Library.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey, Weather Service and Highway Commission, Department of Agriculture, Washington, D. C., and the county press for copies of their publications.

COURSES OF STUDY.

In order to systematize the work of the numerous departments of the College, and as far as possible arrange for specialization within the limits consistent with the normal development of individual students, three distinct courses of study have been prescribed, one of which the student is expected to choose upon entering the collegiate department. These courses are the Agricultural, Mechanical Engineering and Scientific. A continuous and progressive course of work, beginning in the Freshman year, and gradually narrowing in the three succeeding years until the class-work is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation is first laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the Agricultural Course the main study is scientific agriculture in all its various branches. The detailed statement of the arrangement of the course is given on another page. The object of the course is to acquaint young men who propose to engage in farming with the results of recent investigation and research, in order to enable them to engage in practical general farming, dairying or stock-raising, in accordance with the best known methods of modern times. The course leads to the degree of Bachelor of Science.

The Short Winter Course in Agriculture is especially designed for for those who have neither time nor the opportunity to take the regular four-year course. In fact, it is really designed for those actually engaged in farming, and who can spare a few weeks during the winter to attend lectures, and to follow the practical work of the College and Experiment Station. The course embraces the following subjects: Farm crops, drainage, stock-breeding, stock-feeding, manures, tobacco, dairy husbandry, chemistry, horticulture, entomology, plant physiology and pathology, farm accounts, road construction, carpentry, blacksmithing, pipe fitting, veterinary science, the principles of citizenship and the elements of business law. The entire expense, including board, need not be over fifty ($50) dollars. The course extends through the months of January and February. All details are in charge of W. T. L. Taliaferro, Professor of Agriculture, and H. J. Patterson, Director of the Experiment Station.

The details of the Mechanical Engineering Course will be found on another page. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements of wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering.

The Classical Course was instituted in 1893 to meet a demand on the part of the patrons of the College for a course of study which should prepare young men to enter the so-called learned professions. The establishment of the Mechanical Course and the additional facilities offered in the various scientific courses have, to a large extent, done away with the necessity of the Classical Course; and the Board of Trustees, taking these facts into consideration and having also in mind that the true mission of the College was to afford instruction in the agricultural sciences and mechanic arts, passed an order abolishing the Classical Course. Those students already pursuing the Classical Course, or those who may enter the Junior Class, will be allowed to complete the course and thereby receive the degree of B.A.

The Scientific Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science—chemistry, zoology, botany, vegetable pathology, entomology, veterinary science, civil engineering or political science. The basis of the course is a thorough training in mathematics, English, and the principles of citizenship and government. Owing to the number of departments represented in this course, it is found necessary to begin differentiation with a view to specialization in the Sophomore year. In the Senior year, as will be seen in the detailed outline of the course on another page, the work is arranged in a series of groups and studies, each group containing one major study and several minors. This is the plan adopted by most of the prominent and successful colleges of the present day, and presents the twofold advantage of concentration of the student's labor and opportunity for ample laboratory work. The degree conferred for all branches of this course is Bachelor of Science.

The following tables will serve to illustrate in a succinct manner the subjects offered in each item of every session, with the number of periods allotted to each. The subjects for the Senior year are not tabulated for the Agricultural and General Science Courses, as they are mostly elective. Numerals in parenthesis indicate practical work. Two periods of practical work are regarded as equivalent to one period of recitative work, the College day being divided into eight periods of recitative or clsas work of forty-five minutes each.

OUTLINE OF COURSES.

Freshman Year.

FIRST TERM. September 15—December 22.	Agricultural.	Scientific.	Mechanical.
Mathematics, I, II	8	8	8
English, I	5	5	5
History, I, or Latin, I	4	4	4
Elocution, I	1	1	1
Drawing, I	(6)	(6)	(6)
Physical Culture	(3)	(3)	(3)
Geology, I	4	4	......
Woodwork, II	......	......	(6)
Lectures on Agriculture, I	(1)	(1)	......
Technical Instruction, II	......	......	5
SECOND TERM. January 3—March 24.			
Algebra, II	8	8	8
English, I	5	5	5
History, I, or Latin, I	4	4	4
Elocution, II	2	2	2
Physical Culture	(3)	(3)	(3)
Geology, I	5	5	......
Drawing, I	......	......	(6)
Woodwork, III	......	......	(6)
Lectures on Agriculture, I	(1)	(1)	......
THIRD TERM. March 27—June 10.			
Algebra, II	3	3	3
Plane Geometry, III	5	5	5
English, I	5	5	5
History, II, or Latin, I	3	3	3
Literature, II	3	3	3
Drawing, I	......	(6)	(6)
Woodwork, III	(6)	......	(6)
Botany, I	2 (4)	2 (4)	......

NOTE.—Numerals in parenthesis indicate periods of practical work.

OUTLINE OF COURSES.

Sophomore Year.

FIRST TERM. September 15—December 22.	Agricultural.		Scientific.		Mechanical.		Civil Engineering.	
Plane Geometry, III	5		5		5		5	
Rhetoric, III	4		4		4		4	
Physics, I	2		2		2		2	
Chemistry, I, II	4	(3)	4	(3)	4	(3)	4	(3)
Elocution, III	1		1		1		1	
Botany, II	2	(4)	2	(4)	....		....	
Forging or Foundry, VI		(6)	....			(6)	....	
Drawing, IV	....			(6)		(6)		(6)
Microscopy, I		(4)		(4)	....		....	
Applied Mathematics, V	....		....		4		4	
Lectures on Agriculture, I		(1)		(1)	....		....	
SECOND TERM. January 3—March 24.								
Solid Geometry, IV	5		5		5		5	
Rhetoric, III	4		4		4		4	
Physics, I	2		2		2		2	
Chemistry, I, II	4	(4)	4	(4)	4	(4)	4	(4)
Elocution, IV	2		2		2		2	
Bacteriology, II	1	(4)	1	(4)	....		....	
Descriptive Geometry, VII	....		3		3		3	
Drawing, IV	....			(4)		(4)		(4)
Horticulture, I	3	(3)	3	(3)	....		....	
Forging or Foundry, VI	....		....			(6)	....	
Lectures on Agriculture, I		(1)		(1)	....		....	
THIRD TERM. March 27—June 10.								
Trigonometry. V	5		5		5		5	
Literature, IV	3		3		3		3	
German, I	5	(1)	5	(1)	5	(1)	5	(1)
Chemistry, I, II	4	(3)	4	(3)	4	(3)	4	(3)
Bacteriology, III	1	(4)	1	(4)	....		....	
Descriptive Geometry, VII	....		2		2		2	
Drawing, IV	....		1	(4)	1	(4)	1	(4)
Forging or Foundry, VI	....		....			(6)	....	
Agriculture, II	3	(4)	3	(4)	....		....	
Lectures on Agriculture, I		(1)		(1)	....		....	

NOTE.—Numerals in parenthesis indicate periods of practical work.

OUTLINE OF COURSES.

Junior Year.

FIRST TERM. September 15—December 22.	Agricultural.	Scientific.		Civil Engineering.	Mechanical.	Classical.
		Biological.	Chemical.			
Drawing, II	....	....	....	(6)	....	....
German, II	3	3	3	3	3	3
Physics, II	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying, I	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry, II, IV	4 (4)	4 (4)	4 (12)	....	....	....
Drawing, VIII	....	....	....	....	2 (4)	....
Zoology, I	2 (4)	2 (4)	2 (4)	....	....	....
Agriculture, III, IV	4 (6)	....	....	....	....	....
Horticulture, II	2 (2)	....	....	....	....	....
English Composition, V; Literature, VI.	1	1	1	1	1	6
Analytical Geometry, VI	....	....	....	5	5	....
Machine Work, IX	....	....	....	....	(6)	....
Steam Engine, X	....	....	....	....	....	4
Physiology, IV	....	2 (4)	....	....	4	....
Lectures on Agriculture, I	(1)	(1)	....	....	....	....
Latin, II	....	....	....	....	....	6
Political Science, III	....	....	....	....	....	5
SECOND TERM. January 3—March 24.						
Drawing, II	....	....	....	(4)	....	....
German, III	3	3	3	3	3	3
Physics, II	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying, I	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry, III, V, VI	....	4 (4)	4 (12)	....	....	....
Drawing, VIII	....	....	....	....	2 (4)	....
Zoology, I	2 (4)	2 (4)	2 (4)	....	....	....
Agriculture, IV, V	4 (4)	....	....	....	....	....
Horticulture, III	3 (3)	....	....	....	....	....
Civics, IV	....	3	3	3	3	3
English Composition, V; Literature, VII.	1	1	1	1	1	6
Dif. Calculus, VII	....	....	....	5	5	....
Machine Work, IX	....	....	....	....	(6)	....
Botany, III	3 (3)	3 (6)	....	....	....	....
Lectures on Agriculture, I	(1)	(1)	....	....	....	....
Latin, III	....	....	....	....	....	6
THIRD TERM. March 27—June 10.						
Drawing, II	....	....	....	(4)	....	....
German, IV	3	3	3	3	3	3
Physics, II	....	4 (4)	4 (4)	4 (4)	4 (4)	....
Surveying, I	2 (3)	....	....	2 (3)	....	2 (3)
Chemistry, III, VII, VIII	....	....	4 (12)	....	....	....
Logic VIII	....	....	....	....	....	5
Drawing, VIII	....	....	....	....	2 (4)	....
Civics, IV	....	3	3	3	3	3
Horticulture, IV, V	3 (2)	....	....	....	....	....
English, V	1	1	1	1	1	6
Integral Calculus, VIII	....	....	....	5	5	....
Machine Work, IX	....	....	....	....	(6)	....
Latin, IV	....	....	....	....	....	6
Entomology, II	2 (6)	2 (6)	....	....	....	....
Agriculture, VI	4 (4)	....	....	....	....	....
Physiology V	2 (4)	4 (8)	2 (4)	....	....	....
Lectures on Agriculture, I	(1)	(1)	....	....	....	....

NOTE.—Numerals in parenthesis indicate periods of practical work.

OUTLINE OF COURSES.

Senior Year.

FIRST TERM. September 15—December 22.	Mechanical.	Classical.	Civil Engineering.
Psychology, X		4	
German, V	4		4
Graphic Statics, III	4		4
Machine Design, XII	2 (2)		
Machine Work, XIII	8		
Latin, V		6	
French, I		5	
English, IX		4	
Business Law, V		3	
Strength of Materials, V	4		4
Railway Engineering, VII			2 (8)
SECOND TERM. January 3—March 24.			
German, VI	4		4
Power Plants, XI	2		
Machine Design, XII	2 (4)		
Machine Work, XIII	(10)		
Economics, VI	4	4	4
Latin, VI		6	
French, II		5	
English, IX		4	
Psychology, X		4	
Hydraulics, VI			3
Structural Designing, IV			2 (6)
Practical Problems in Surveying and Engineering, IX			(8)
THIRD TERM. March 27—June 10.			
Literary Criticism, XI		3	
Machine Design, XII	2 (2)		
Machine Work, XIII	(10)		
Testing, XIV	(6)		
Economics, VI	4	4	4
Latin, VII		6	
French, III		5	
English, IX		4	
Highway Engineering, VIII			3
Structural Designing, IV			2 (6)
Practical Problems in Surveying and Engineering, IX			(12)

NOTE.—Numerals in parenthesis indicate periods of practical work,

The work for the Senior year in *Agriculture and General Science shall consist of a major subject and two or more minor subjects. This work will be elective upon consultation with the Professor in charge of the major subject.

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*Veterinary Science is a required subject in the Senior Year for students of the Agricultural Course.

The student will be required to elect an amount of work, the minimum of which shall be an equivalent of twenty (20) periods recitative work, at least ten (10) periods of which shall be devoted to the major subject, and ten (10) to the minor subjects.

TWO-YEAR COURSE IN AGRICULTURE.

First Year.

FIRST TERM.		SECOND TERM		THIRD TERM.	
Agriculture	7 (6)	Agriculture	3 (4)	Agriculture	7 (6)
Chemistry	4 (3)	Chemistry	4 (4)	Chemistry	4 (3)
Woodwork	(6)	Horticulture	4 (4)	Botany	2 (4)
Arithmetic	5	Blacksmithing	(6)	Veterinary Science	1 (4)
		Veterinary Science	2 (4)		

Second Year.

FIRST TERM.		SECOND TERM.		THIRD TERM.	
Agriculture	6 (6)	Agriculture	5 (6)	Agriculture	2 (4)
Horticulture	2 (4)	Horticulture	3 (3)	Horticulture	3 (3)
Veterinary Science	2 (6)	Veterinary Science	2 (6)	Veterinary Science.	2 (6)
Botany	3 (6)	Entomology	2 (4)	Entomology	2 (4)
		Dairying	1 (4)	Stock Feeding	4 (4)

SHORT WINTER COURSE IN AGRICULTURE.

Commencing January 4, 1906.

A ten-week course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-year course. This solves the problem for them.

Outline of the Course.

The work of the course consists of lectures and practical exercises in the laboratories, shops, greenhouses, barns and creamery. The subjects handled and the allotment of hours are as follows: Farm crops and cultivation of the soil, 10; plant production, 10; farm live stock, 20; tobacco, 6; stock feeding, 9; agricultural chemistry, 10; manures, 10; farm accounts, 12; dairying, 40; veterinary science, 20; carpentry, blacksmithing and pipe fitting, 50; plant physiology and pathology, 15; economic entomology, 20; horticulture, 30; road construction, 5; principles of citizenship, 10.

No Expense for Tuition, Use of Laboratories, or Supplies.

Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College for $4.00 per week.

DEGREES.

Bachelor's Degree.

As a requisite for graduation. the candidate for this degree must, in addition to having satisfactorily completing the work previously outlined, submit a thesis which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

Master of Arts.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.
2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, the Professor of English and Civics and the Professor of Languages of this College.
3. The candidate must be prepared to submit to an examination in the works of the following authors: Caesar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Cacitus, Plautus, Terence, Juvenal.

Master of Science.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the Coll lege, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.
2. Upon College graduates of not less than two years' standing, who are employed in any of the departments of the College and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

GENERAL INFORMATION.

Requirements for Admission.

For Admission to the College Department Freshman Class, an entrance examination is required. This examination will be held at the College on September 13th and 14th, 1904. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic complete, algebra, as far as quadratics, political and phyiscal geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic, as far as percentage, United States history and political geography.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present certificate from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and wood work.

Every applicant for admission to the college must bring satisfactory testimonials as to his character and scholarship from his former teacher. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

Examinations and Promotions.

In order to pass from one class to the next higher class a student is required to pass an examination in each study pursued by a mark of at least sixty per cent. and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical or Civil Engineering Courses will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

Scholarships.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County Examiner. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present themselves at the College, or other designated place, at the date which may be named, in the September or January next following the award, and be examined by College authorities for entrance to the Freshman Class. Alternates are to be thus examined, as well as principals and in case of a failure of the principal to secure or hold the scholarship, the alternate will have the first right to the place, if within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to secure the same, pass the entrance examination of the College, and (if entering in January) such other examination as may be required to join *the Freshman Class. To hold a scholarship, the student must make all payments promptly and meet such requirements of the College as to scholarship and deportment as may be prescribed by the President and Faculty. By passing special examinations, candidates for scholarship may be permitted to enter the Sophomore Class, or by presenting satisfactory certificates.*"

Experiment Station Scholarships and Fellowships,

In order to further investigations relating to agriculture or horticulture the Experiment Station has arranged to offer scholarships not exceeding one hundred dollars in amount to students pursuing such investigations. Those competing for scholarships shall commence their investigations not later than the second term of the Junior year, the awards of scholarship to be paid on satisfactory completion of the Senior year's work. The amount of such scholarships shall be determined from time to time and depend upon the character of the work in hand.

When investigations begun under scholarships are not completed, or where further work is deemed advisable, fellowships have been established to be awarded for such time and amount as may be deemed necessary for the completion of the work, but will not exceed three hundred dollars per year. Further information may be obtained from the Director of the Experiment Station.

General Rules and Regulations.

The attention of parents is earnestly called to the following rules in force at this College; The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures of a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to parents during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian and received by the President of the College:

"It is understood that the President of the College as the executive of the same, and acting for the Board of Trustees, a party to this contract, *has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations herein set forth.*"

A cadet manifesting an indifference to the observance of the rules and regulations of the institution or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so his parents upon notice given by the President must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examinations is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that failure to not live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal,*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone calls, unless they are urgent.

Students will not be permitted to make contracts or to sell any article to their associates without the approval of the President.

The sale of second hand furniture or clothing to new cadets is prohibited unless the sale be approved by the commandant of cadets.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE ENDORSED BY THE FACULTY.

1. A student may not change his course of study, unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.

2. Examinations to make up conditions will be given only at times set

apart by this committee. These dates will be just before the regular quarterly examinations in December, April and June; also the day before the resumption of college work in September. Should for any reason a special examination be requested at any other time a charge of $2.00 will be made for each subject on which the applicant is examined.

3. To attain proficiency a student must make an examination grade of 60 per cent. also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent is required.

4. A student may not be promoted if conditioned in more than one study.

5. A student may not be promoted if he has any condition of more than a year outstanding.

6. No student may be promoted from the Preparatory Department with any condition.

7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.

8. A student is subject to an oral examination at any time within ten days after a written examination.

9. An examination paper, containing erasures or showing alterations, may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.

10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.

11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students in the agricultural and general science courses must submit a schedule of elective work, to be approved by this committee, prior to the resumption of college work in September.

13. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

14. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the college seal nor the Governor's signature.

15. No student may take work in more than one class during any one term.

STUDENT EXPENSES.

The expenses of the College year for the several classes of students are as follows: No reductions are made for regular vacations. No charge is made for tuition, books or diplomas.

Boarding Students.

Board, heat, light and room for the scholastic year $200.00.

Scholarship Students.

Board, heat, light and room for the scholastic year, $100.00.

Day Students.

Room, heat and tuition for the scholastic year, $40.00.

Short Winter Course Students.

Board, heat, light and room, $4.00 per week.

Time of Payment.

For Boarding Students $50.00 on entrance, $50.00 Nov. 15th., $50.00 February 1st, $50.00 April 1st.

For Scholarship Students, $25.00 on entrance, $25.00 Nov. 15th, $25.00 February 1st, $25.00 April 1st.

For Day Students $10.00 on entrance $10.00 Nov. 15th. $10.00 Feb. 18th., $10.00 April 1st.

Promptness of payment is essential.

Students reaching the College at any time after its opening, prior to October 15th, in each year will be charged for the entire scholastic year.

Students entering College after November 15th, in each year will be charged as follows, viz.:

Boarding students at rate of $20.00 per month; Scholarship students at rate of $15.00 per month; Day students at rate of $5.00 per month.

No charge will be made for a less period than a month.

Table board for students not rooming at the College will be $14.00 per month. For less than a month 25 cents per meal.

Rebate will be allowed only for illness of at least one month's duration or in case of dismissal. In such cases the rebate made shall be for boarding students at the rate of $15.00 per month; for scholarship students at the rate of $10 per month; for day students at the rate of $5 per month.

Fees

No fees of any character will be charged by the College.

Students will be admitted free of cost to membership in the College Athletic Association.

Damage to College property by students will be promptly reported to parents or guardians and prompt payment expected.

Uniform*.

Dress Uniform (coat, trousers and cap)	$15.75
Khaki Uniform (coat, trousers, hat and leggins)	7.75
Shirt and belt	1.25

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

Coaching for backward students will be provided by the President upon application at $3.00 per month.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed)
2 pairs sheets (for single bed)
4 pillow cases.
2 white dimity bedspreads (three quarters size.)
6 towels.
1 chair (uniform.)

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* Price quoted on basis of last year's contract.

1 pillow.
1 mattress (shuck), cotton top (uniform.)

The room-mates together purchase the following articles:

1 set of lamp fixtures (uniform).
1 pitcher and basin (uniform).
2 table cloths (uniform).
2 cloths bags (uniform).
1 broom.
1 looking-glass.
1 slop-jar (porcelain).

All the articles marked uniform in the fore-going list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the college has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.

The College will not be responsible for articles left in the barracks during vacations unless by special arrangement.

Student Opportunities

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference. The compensation in all cases is fixed at ten cents per hour.

Industrial Scholarships

There are also offered by the College a limited number of "Industrial Scholarships." The holder of such a scholarship is required to work as a waiter or janitor a definite number of hours per day; these hours are so arranged as to conflict as little as possible with his time for study or recitation. Industrial scholarship students are not required to drill.

In consideration of their work a rebate of $150 a year is granted each of these students.

A selection is made from applicants for this scholarship on the basis of mental preparation, physical ability and moral character. Preference will be given to the sons of citizens of Maryland. Applications for this scholarship specifying age, weight, mental advancement and enclosing testimonial of moral character must be made in writing to the President of the College prior to September 1st, and the successful applicants for this scholarship will be notified to report in person at the College on September the 12th.

Letter from Department of Agriculture.

The following letter and circular will be of interest to young men entering this institution. It gives an excellent opportunity for them to advance themselves in the line of their special work, at the same time receiving compensation which will enable them to pay all expenses. This offer on the part of the Department of Agriculture is greatly appreciated, and will, no doubt, be availed of by many attending the land grant colleges—the best instructors and the most complete facilities are the advantages attending the opportunity:

"Department of Agriculture, Washington. D. C.
"June 27. 1899.

"Dear Sir—In my annual report to the President for 1898 I announced my intention of affording opportunities for graduates of agricultural colleges to pursue post graduate studies in connection with work in the scientific division of this Department, as far as practicable. In pursuance of this policy I have made an arrangement with the Civil Service Commission for the registration of the graduates of colleges receiving the benefits of grants of land or money from the United States, who may desire to enter the service of the Department as 'Scientific Aids,' on the terms stated in the notice of the Commission herewith enclosed.

"It seems to be entirely appropriate that the National Government should aid the institutions to which it has already so largely given financial support in the preparation of their graduates for posts of usefulness in this Department, or in the States from which they come, especially as investigators and teachers along scientific lines. I hope therefore that the effort which I am now making in this direction will be but the beginning of the opening up of opportunities for graduate study at the National Capital to those of your graduates who are especially fitted to do high grade scientific work. It will, of course, be understood that under present conditions the Department can only admit a very limited number of scientific aids Our purpose is to choose from the eligible register those persons who furnish the best evidence of having peculiarly good qualifications for aiding in the work of the Department now in progress.

"In extending this notice will you kindly explain to your graduates the necessity of making a clear and full statement of their attainments and qualifications in special lines of science? Correspondence regarding application blanks and other matters connected with registration should be had promptly with the Civil Service Commission. "Very respectfully,
"JAMES WILSON,
"Secretary of Agriculture.

"To R. W. Silvester, President, College Park, Md."

SCIENTIFIC AID, DEPARTMENT OF AGRICULTURE.

August 1st 1899.

The United States Civil Service Commission announces that it desires to establish an eligible register for the position of Scientific Aid, Department of Agriculture.

The examination will consist of the subjects mentioned below, which will be weighted as follows:

	Subjects.	Weights.
1.	College Course with Bachelor's Degree	50
2.	Post graduate Course and Special Qualifications	25
3.	Thesis or Other Literature	25
	Total	100

It will be noted that applicants will not be required to appear at any place for examination, but will be required to file with the Commission prior to the hour of closing business, on August 1st, 1900 their statement and other material which will be required as specified in a special form which will be furnished them by the commission together with application blank (Form 304) in order to have their names entered upon the register which will be made immediately after the date mentioned. Persons who are unable to file their applications prior to August 1st. 1900 may file them at any subsequent time when they will be rated and the names of those attaining eligible averages will be entered upon the register.

For information of applicants the following statement is made, as received from the Secretary of Agriculture:

1. An application will be limited to graduates of colleges receiving the benefits of grants of land or money from the United States.

2. Each applicant must file with the United States Civil Service Commission Washington D. C. a properly certified statement as to the length of time spent in College, the studies pursued, the standing in these studies, the special work it is desired to take up and the special qualifications for such work and finally a thesis upon such scientific subjects as the applicant may select or in lieu of this. any literature on scientfic subjects, over his own signature.

3. The length of time any scientific aid may serve in the Department is limited to two (2) years.

4. The salary shall not exceed forty dollars ($40.00) per month.

The minimum age limitation for entrance to this examination is twenty (20) years; there is no maximum age limitation.

This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded and certified without regard to any consideration save their ability as shown by them in the examination. Persons desiring to compete should at once apply to the United States Civil Service Commission Washington D. C. for application blanks (Form 304) and special forms.

STUDENT ORGANIZATIONS.

Students clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and College pride and developing an *esprit de corps* among the students. Each class has its own organization in which matters relating to class work are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline, and tends to raise the standard of student honor.

Young Men's Christian Association.

E. I. Oswald, President. J. J. T. Graham, Vice-President.
R. H. Dixon, Secretary. C. H. Harper, Treasurer.

Most encouraging work has been done by this organization during the past year, and much interest has been shown in its meetings.

Athletic Association.

W. H. Byron, President. E. D. Digges, Vice-President.
E. H. Snavely, Secretary. J. W. Somerville, Treasurer.

Literary Societies.

"New Mercer" Literary Society.

A. A. Parker, President. W. White, Vice-President.
R. H. Dixon, Secretary and Treasurer.

"Morrill" Literary Society.

Glenworth Sturgis, President. J. J. A. Krentzlin, Vice-President.
E. H. Snavely, Sec'y and Treas. R. D. Nichols, Sergeant-at-Arms.

These societies are invaluable adjuncts to College work. Through them a good knowledge of parliamentary law is gained as well as a readiness of expression and activity in thought—qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

The Oratorical Association of Maryland Colleges.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Argicultural College. Contests are held annually at these colleges, in rotation, and a marked improvement is to be observed as a result of its organization.

Editorial Staff of "Reveille," '04.

Glenworth Sturgis, Editor-in-Chief.
A. A. Parker,
W. White, Associate Editors.

Departmental.

Athletics, E. D. Digges, W. T. Smith.
Literary, G. Sturgis.
Humorous, J. W. Somerville, M. Duckett.
Rossbourg Club, J. C. Cockey.
Class and Historical, J. J. A. Krentzlin.

Board of Managers.

J. N. Mackall, Business Manager.
W. H. Byron,
E. T. Hayman,
R. D. Nicholls, Associate Business Managers.

The "Reveille" is the College Annual, edited entirely by the Senior Class; it is the successor of the "Cadet's Review." Nine editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard, both of originality and expression.

Rossbourg Club.

J. C. Cockey, President. J. N. Mackall, Vice-President.
J. J. A. Krentzlin, Secretary. W. White, Treasurer.

The social man is a necessity—hence, this organization is encouraged and supported by the President and Faculty. Its entertainments have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

THE ALUMNI ASSOCIATION.

The growth of the Alumni Association during the past year is a source of great satisfaction to the officers of the College, and of the Association. Through the efforts of its officers a smoker was held at the College in June, this year. Renewed interest was shown by the existing members of the Association, and the occasion was marked by a large increase in the membership.

All indications point to a great advance in the growth of the organization, and now it is felt that the Association may begin to exercise its influence along the lines of its avowed purpose and object. By restricting the competition for the medal to be awarded by the Association for the best paper on "Agricultural Science" to those students pursuing original research, it is intended and hoped by the Association, to stimulate scientific investigation by the students in the various scientific departments of the College. With the improved and more adequate facilities which have been provided, it is thought that the College is well able to promote this class of work to a greater extent than has been possible in the past; and the competition hereby instituted should tend to elevate the standard of scholarship in the College.

The officers of the Association for the year are: President, S. S. Buckley, '93; Vice-President, W. S. Keech, '90; Secretary-Treasurer M. N. Straughn, '99; Executive Committee, members at large, F. B. Bomberger, '94; and W. W. Skinner, '95.

Graduates and members of the Association are requested to keep the Secretary-Treasurer, M. N. Straughn, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates which will enable the officers to locate and communicate with them, will facilitate their efforts and will tend to further the success of the Association.

DEGREES AND MEDALS.

Degrees Conferred 1905, with Subjects of Theses.

MASTER OF SCIENCE.

E. P. Walls, Queen Anne County, Md.

"Some Observations on the Weight of the Kernels and the Size of the Germ in Seed Corn as Affecting the Vigor of the Resulting Plant."

MASTER OF ARTS.

W. R. M. Wharton, Worcester County, Md.

"State of Rome, Social, Moral and Political, as Portrayed by Juvenal."

BACHELOR OF SCIENCE (in Mechanical Engineering).

Walter Harwood Byron,
Washington Co., Md.

"Design of a Machine for Measuring Irregular Areas."

Marion Duckett, Jr., Prince George County, Md.

"The Present Relation of Electricity to Steam."

John Julius Augustus Krentzlin,
Washington, D. C.

"Design and Construction of a ¼ Horse Power Motor."

Wesley Temple Smith, Caroline County, Md.

"Design of a Heating Apparatus for the College Buildings."

Earle Henry Snavely, Baltimore County, Md.

"Design of a 20-Ton Shears."

BACHELOR OF SCIENCE (in Civil Engineering).

Eugene Dudley Digges, Charles County, Md.

"Design of a System of Drains for a Part of the Maryland Agricultural Experiment Station Farm."

Edgar Thomas Hayman, Worcester County, Md.

"The Location of a Spur Track from the B. & O. R. R. to the Maryland Agricultural College."

John Nathaniel Mackall, Calvert County, Md.

"Design of a System of Drains for a Part of the Maryland Agricultural Experiment Station Farm."

John Wesley Porter Somerville.
Allegany County, Md.

"The Location of a Spur Track from the B. & O. R. R. to the Maryland Agricultural College."

Wellstood White, Montgomery County, Md.

"The Establishment of a True Meridian at the Maryland Agricultural College."

BACHELOR OF SCIENCE (in Chemistry).

Roger Darby Nicholls, Montgomery County, Md.

"Determination of Nitrogen in Nitrates."

Albert Augustus Parker, Worcester County, Md.

"Determination of Phosphoric Acid in Phosphates."

BACHELOR OF ARTS.

Glenworth Sturgis, Worcester County, Md.

"The Evolution of American Literature."

CERTIFICATES AWARDED.

TWO YEAR' COURSE IN AGRICULTURE.

Walter Barrett Harris, Kent County, Md.
Edward Ingram Oswald, Washington County, Md.

SPECIAL IN MECHANICAL ENGINEERING.

John Councilman Cockey, Baltimore County, Md.

"Design of a Screw-Cutting Lathe."

MEDALS AWARDED—Commencement, 1905.

Glenworth Sturgis and Wellstood White (tie),

Senior Medal; for highest standing for four years. Awarded by the President. Average for full course, 94.

Lemuel Ferdinand Zerkel,

Junior Medal; for highest standing for Junior year. Awarded by the President. Average for Junior year, 95.5.

Lemuel Ferdinand Zerkel,

Gold Medal; for best debater in competitive debate. Awarded by the Alumni Association.

Roger Darby Nicholls,

Gold Medal; for best essay in Agricultural Science. Awarded by the Alumni Association.

Glenworth Sturgis,

Gold Medal; for best essay on "American Citizenship." Awarded by the Board of Trustees.

MILITARY DEPARTMENT ROSTER.

CADET BATTALION.

——— Commandant of Cadets.

Field and Staff.

Major—L. F. Zerkel.

First Lieutenant and Adjutant..............H. J. Caul.
Second Lieutenant and Quartermaster.....J. L. Showell.

NON-COMMISSIONED STAFF.

Sergeant-Major ....E. A. Blair.
Quartermaster Sergeant...................S. T. Vocke.
Color Sergeant.........................H. D. Williar.

	Company "A."	Company "B."	Company "C."
Captain	J. J. T. Graham.	G. M. Mayer.	R. H. Dixon.
First Lieutenant	L. E. Bassett.	S. P. Thomas.	A. M. McNutt.
Second Lieutenant	C. S. Ridgway.	J. W. Mitchell.	....
First Sergeant	J. P. Mudd.	E. S. Holloway.	F. E. Linnell.
Second Sergeant	A. D. Cockey.	C. H. Harper.	A. N. Bowland.
Third Sergeant	H. H. Owings.	R. F. Goodell.	C. L. Lippencott.
Fourth Sergeant	F. Zouck.	M. H. Adams.	M. C. Plumacher.
Fifth Sergeant	E. H. Plumacher.	H. S. Hatton.	....
First Corporal	G. W. Firor.	T. B. Mackall.	C. F. Batman.
Second Corporal	H. B. Hoshall.	J. P. Shamberger.	W. E. Lampkin.
Third Corporal	J. B. Dirickson.	B. R. Cooper.	J. D. Darby.
Fourth Corporal	C. F. Mayer.	E. J. Byron.	N. L. Warren.

ROSTER OF MATRICULATES.

SESSION 1904—1905.

Graduate Students.

	POST OFFICE.	COUNTY.
Choate, R. P.	Randallstown	Baltimore
Shaw, S. B.	Rehoboth	Somerset
Stoll, E. W.	Brooklyn	Anne Arundel
Walls, E. P.	Barclay	Queen Anne

Senior Class.

Byron, W. H.	Williamsport	Washington.
Digges, E. D.	Port Tobacco	Charles
Duckett, M. Jr.	Hyattsville	Prince George
Hayman, E. T.	Stockton	Worcester
Krentzlin J. J. A.	Washington	*District of Columbia*
Mackall, J. N.	Mackall	Calvert
Nicholls, R. D.	Germantown	Montgomery
Parker, A. A.	Pocomoke City	Worcester
Smith, W. T.	Ridgely	Caroline
Snaveley, E. H.	Grange	Baltimore
Somerville, J. W. P.	Cumberland	Allegany
Sturgis, G.	Snow Hill	Worcester
White, W.	Dickerso	Montgomery

Junior Class.

Bassett, L.	Cambridge	Dorchester
Caul, H. J.	Buffalo	*New York*
Dixon, R. H.	Cambridge	Dorchester
Goodell, R	Frederick	Frederick
Graham, J. J. T.	Ingleside	Queen Anne
Mayer, G. M.	Frostburg	Allegany
McNutt, A. M.	Berkley	Harford
Mitchell, J. W.	Brookline	*Massachusetts*
Ridgway, C. S.	Beltsville	Prince George
Showell, J. L.	Berlin	Worcester
Thomas, S. P.	Sandy Spring	Montgomery
Waters, F.	Seat Pleasant	Prince George
Zerkel, L. F.	Luray	*Virginia*

Sophomore Class.

Adams, M. H.	Princess Anne	Somerset
Blair, E. A.	Baltimore	Baltimore City
Bowland, A. N.	Kingston	Somerset
Capestany, R. L.	San Juan	*Porto Rico*
Coale, J.	Marlboro	Prince George
Cockey, A. D.	Owings Mills	Baltimore
Dirickson, J. B.	Berlin	Worcester
Firor, G. W.	Thurmont	Frederick
Fluharty, W. B.	Greensboro	*North Carolina*
Gassoway, W. A.	Germantown	Montgomery
Gill, J. V.	Boring	Baltimore

Harper, C. H.	Baltimore	Baltimore City
Haslup, E. P.	Laurel	Prince George
Hatton, H. S.	Piscataway	Prince George
Holloway, E. S.	Rosaryville	Prince George
Hudson, M. A.	Stockton	Worcester
Iglehart, J. L.	Simpsonville	Howard
Jones, J. E.	Davidsonville	Anne Arundel
Lewis, M. C.	Crisfield	Somerset
Linnell, F. E.	Falmouth	*Massachusetts*
Lippencott, C. L.	Grafton	*West Virginia*
Long, U. W.	Selbyville	*Delaware*
Long, W. B.	Westover	Somerset
McCandlish, E. G.	Piedmont	*West Virginia*
Mackall, T. B.	Mackall	Calvert
Mahoney, W. T.	Leeds	Cecil
Merryman, N. B.	Cockeysville	Baltimore
Mudd, J. P.	Washington	*District of Columbia*
Owings, H. H.	Simpsonville	Howard
Pinck, G. W.	Buffalo	*New York*
Plumacher, E. H.	Maracaibo	*Venezuela*
Plumacher, M. C.	Maracaibo	*Venezuela*
Pyles, R. G.	Barnesville	Montgomery
Somerville, W. A. S.	Cumberland	Allegany
Stinson, H. W.	Columbia	Howard
Thrasher, H. C.	Deer Park	Garrett
Tillson, E. C.	Davis	*West Virginia*
Tillson, R. J.	Davis	*West Virginia*
Vocke, S. T.	Baltimore	Baltimore City
Vrooman, C. C.	Hyattsville	Prince George
Whiting, L. W.	Hyattsville	Prince George
Williar, H. D.	Ruxton	Baltimore
Zouck, J. F.	Glyndon	Baltimore

Freshman Class.

Allen, R. S.	Rising Sun,	Cecil
Batman, C. F.	Luray	*Virginia*
Benson, R. H.	Grifton	Montgomery
Becker, G. G.	Baltimore	Baltimore City
Bishop, C. C. B.	Snow Hill	Worcester
Brice, N E.	Annapolis	Anne Arundel
Broome, J. P.	Wallville	Calvert
Byron, E. J.	Williamsport	Washington
Campbell, G. W.	Selbyville	*Delaware*
Church, L. M.	Washington	*District of Columbia*
Clark, F. P.	Keep Tryst	Washington
Cooper, B. R.	Worton	Kent
Coudon, G. W. P.	Perryville	Cecil
Crisp, A. P.	Brooklyn	Anne Arundel
Darby J. D.	Buck Lodge	Montgomery
Davis, F. E.	Hyattsville	Prince George
Day, G. C.	Dublin	Harford

Dorr, G. W.	Hyattsville	Prince George
Firor, J. W.	Thurmont	Frederick
Galt, D. B.	Hyattsville	Prince George
Galt, F. S.	Hyattsville	Prince George
Gamero, A.	Guatemaula	*Central America*
Griffin, J. P.	Highland	Howard
Groves, W. D.	Ellicott City	Howard
Guthrie, J. B.	Baltimore	Baltimore City
Hall, J. M.	Hyattsville	Prince George
Hall, R. H.	Barstow	Calvert
Harr, A. G.	Forest Glen	Montgomery
Haslup, J. E.	Savage	Howard
Hays, L.	Barnesville	Montgomery
Holmead, J. H.	Washington	*District of Columbia*
Hoshall, H. B.	Parkton	Baltimore
Jameson, G.	Hughesville	Charles
Kershner, A. J.	Hagerstown	Washington
King, J. H.	Pocomoke City	Worcester
Knotts, H. C.	Rehoboth	Somerset
Lampkin, W. E.	Houston	*Texas*
Le Gore, W. C.	Le Gore	Maryland
Lewis, W. A.	Bethesda	Montgomery
Lippencott, H. W.	Grafton	*West Virginia*
Lockie, L. G.	Altoona	*Pennsylvania*
Lowry, S. L.	Rossville	Baltimore
McCabe, W. W.	Selbyville	*Delaware*
McSorley, F. C.	Stevensville	Queen Anne
Mayer, C. F.	Frostburg	Allegany
Milburn, C P.	Leonardtown	St. Marys
Ort, F. C.	Frostburg	Allegany
Otis, H.	Sykesville	Carroll
Owings, H. W.	Simpsonville	Howard
Packard, J.	Rockville	Montgomery
Paull, P. P.	Buffalo	*New York*
Pena, A. G.	Vera Cruz	*Mexico*
Porter, H. L.	Oakland	Garrett
Ritzel, A. J.	Westover	Somerset
Rumig, E.	College Park	Prince George
Russell, B.	Washington	*District of Columbia*
Sanford, J. W.	Washington	*District of Columbia*
Sanders, O. H.	Lankford	Kent
Shamberger, J. P.	Parkton	Baltimore
Silvester, R. L.	College Park	Prince George
Solari, C. S.	College Park	Prince George
Stabler, A. L.	Brighton	Montgomery
Stott, R. A.	Taneytown	Carroll
Thomas, W. H.	Cross Roads	Charles
Toadvine, G. C.	White Haven	Wicomico
Todd, A. R.	Mount Washington	Baltimore
Waggner, G. M.	Baltimore	Baltimore City
Warren, N. L.	Selbyville	*Delaware*

Warthen, C. A.	Kensington	Montgomery
Watkins, G. C.	Middlebrook	Montgomery
Whiting, H. R.	Hyattsville	Prince George
Wilson, G. W.	Simpsonville	Howard
Woodson, A R	Washington	*District of Columbia*
Wright, E C.	East Newmarket	Dorchester
Youngblood, F. N.	Norfolk	*Virginia*
Zimmerman, G C.	Frederick	Frederick

Preparatory Department.

Ager, R.	Hyattsville	Prince George
Allison, J. M. F.	Washington	*District of Columbia*
Allnutt, E. C.	Rockville	Montgomery
Baldt W. J.	Chester	*Pennsylvania*
Beale, A. J.	Fort Howard	Baltimore
Beasman, F. B.	Sykesville	Carroll
Bennett, J. C.	Brandy	*Virginia*
Berry, L. G.	Hyattsville.	Prince George
Bowley, E. H.	Shepherdstown	*West Virginia*
Breeden, G. M.	Sollers	Calvert
Breeden A. C.	Sollers	Calvert
Bryant, A. S.	Berwyn	Prince George
Burgess, A. E.	Hyattsville	Prince George
Burgess, C. E.	Aquasco	Prince George
Burwell, J. P.	Philadelphia	*Pennsylvania*
Canby, W. M.	Colesville	Montgomery
Carpenter, F. A.	Philadelphia	*Pennsylvania*
Chunn, S. C.	Washington	*District of Columbia*
Crapster, J. O.	Taneytown	Carroll
Darby, J. E.	Buck Lodge	Montgomery
Dickey, P. S.	Baltimore	Baltimore City
Dudley, C.	Easton	Talbott
Eidman, L. R.	Baltimore	Baltimore City
Emmert, F. B.	Hagerstown	Washington
Grason, J. P.	Towson	Baltimore
Halpine, N. J.	Washington	*District of Columbia*
Hayden, O. M.	Maddox	St. Marys
Heyser, W. W.	Hagerstown	Washington
Hinea, M. D.	Walkersville	Frederick
Hinton, W. H	Washington	*District of Columbia*
Hooper, T. H.	Arlington	Baltimore
Kenly, E E.	Baltimore	Baltimore City
Knight, H. T.	Riverdale	Prince George
Legge, J. A.	Washington	*District of Columbia*
Linkins, E.	Washington	*District of Columbia*
McFarland, J. A.	Hyattsville	Prince George
Merceron, H. J.	Sykesville	Carroll
Merceron, J. E.	Sykesville	Carroll
Moore, T. K.	Washington	*District of Columbia*
Mudd, T. J.	Waldorff	Charles
Neal, S. L.	Hurlock	Dorchester

Parker, A. G.	Berwyn	Prince George
Parker, J. B.	Berwyn	Prince George
Roberts, M.	Washington	*District of Columbia*
Russell, W. J.	Washington	*District of Columbia*
Sayer, J. P.	Washington	*District of Columbia*
Shaffer, E. W.	Laurel	Prince George
Shipley, W. G.	College Park	Prince George
Shipley, W. S.	Sykesville	Carroll
Southard, P. C.	Wilmington	*Delaware*
Sparks, B. P.	Washington	*District of Columbia*
Stevenson, F.	Jessup	Anne Arundel
Thomas, C. E.	Cross Roads	Charles
Treadwell, C. H.	Baltimore	Baltimore City
Turner, A. C.	Sollers	Calvert
Walker, S. B.	Mitchellsville	Prince George

Two Year Students in Agriculture.

SECOND YEAR.

Harris, W. B.	Coleman	Kent
Oswald, E. I.	Chewsville	Washington
Wood, R. V.	Barnesville	Montgomery

FIRST YEAR

Bennett, B. C. S.	Brandy	*Virginia*
Blake, J. D.	Baltimore	Baltimore City
Rice, R. W.	Baltimore	Baltimore City

Special Students.

Besa, A. M.	Santiago	*Chille*
Cockey, J. C.	Owings Mills	Baltimore
Dupuy, P. E.	Pacasmayo	*Peru*
Foster, A. B.	Santiago	*Chille*
Foster, C. B.	Santiago	*Chille*
Fuente, M. A.	Pacasmayo	*Peru*
Luna, J. O.	Pacasmayo	*Peru*
Salinas, J.	Lima	*Peru*
Valdes, P.	Porto Principe	*Cuba*

Short Winter Course Students.

Massey, S. J.	Sudlersville	Queen Anne
Merrill, M. R.	Pocomoke City	Worcester
Cohill, L. A.	Hancock	Washington
Dubel, J. C.	Boonsboro	Washington
Hall of B., E.	Millersville	Anne Arundle
Hance, F.	Laurel	Prince George
Matthews, E. P.	Pocomoke City	Worcester
Rhodes, C.	Willoughby	Queen Anne
Robins, J. B.	Snow Hill	Worcester
Shamberger, J. C.	Parkton	Baltimore
Sweet, Chas. T.	Swanton	Garrett
Thomas, R. B.	Ednor	Montgomery
Thrift, S. G.	Travilah	Montgomery

Summary of Students.

Graduate Students	4
Senior Class	13
Junior Class	13
Sophomore Class	43
Freshman Class	76
Two-Year Students	6
Special Students	9
Preparatory Students	56
Short Course Students	13
Total	233

LIST OF PRESIDENTS OF THE MARYLAND AGRICULTURAL COLLEGE.

1.	Prof. Benjamin Hallowell,	President of the Faculty	1859—1860
2.	Rev. J. W. Scott	" " " "	1860—1860
3.	Prof. Colby	" " " "	1860—1861
4.	Prof. Henry Onderdonk	" " " "	1861—1864
5.	Prof. N. B. Worthington	" " " "	1864—1867
6.	Prof. C. L. C. Minor,	President of College	1867—1868
7.	Admiral Franklin Buchanan	" " " "	1868—1869
8.	Prof. Samuel Regester	" " " "	1869—1873
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11.	Gen. Augustus Smith	" " " "	1883—1887
12.	Allen Dodge, Esq. Protem	" " " "	1887—1888
13.	Major Henry E. Alvord	" " " "	1888—1892
14.	Capt. R. W. Silvester	" " " "	1892 ——

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The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

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Sands, W. B , A.B , Lake Roland, Md.

Class of '64

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Todd, W. B., B S.

Class of '66.

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*Roberts, L. Ph.B.

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Class of '73.

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Miller, O., A.B. (M.A. '75).
Regester, A., A.B.
Waters, W. F., A.B.
Worthington, D., A.B.
Worthington, W , A.B.

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Hall, D., M.A.
Norwood, F. C., A B. (M.A. '77), Frederick, Md.

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Miller, L , B.S., Albuquerque, New Mexico.

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Sturges, G., B A., Snow Hill, Md.
White, M., B.S., Dickerson, Md.

*Deceased.

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CLASS IN SURVEYING.

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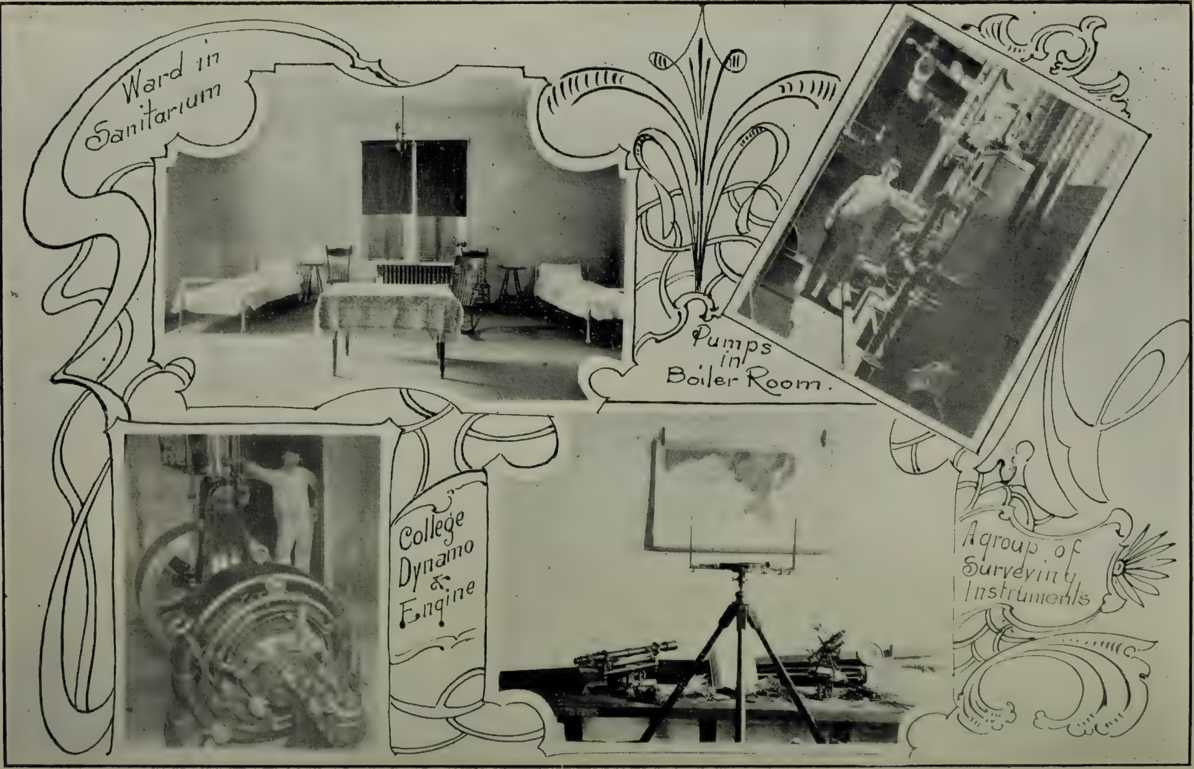
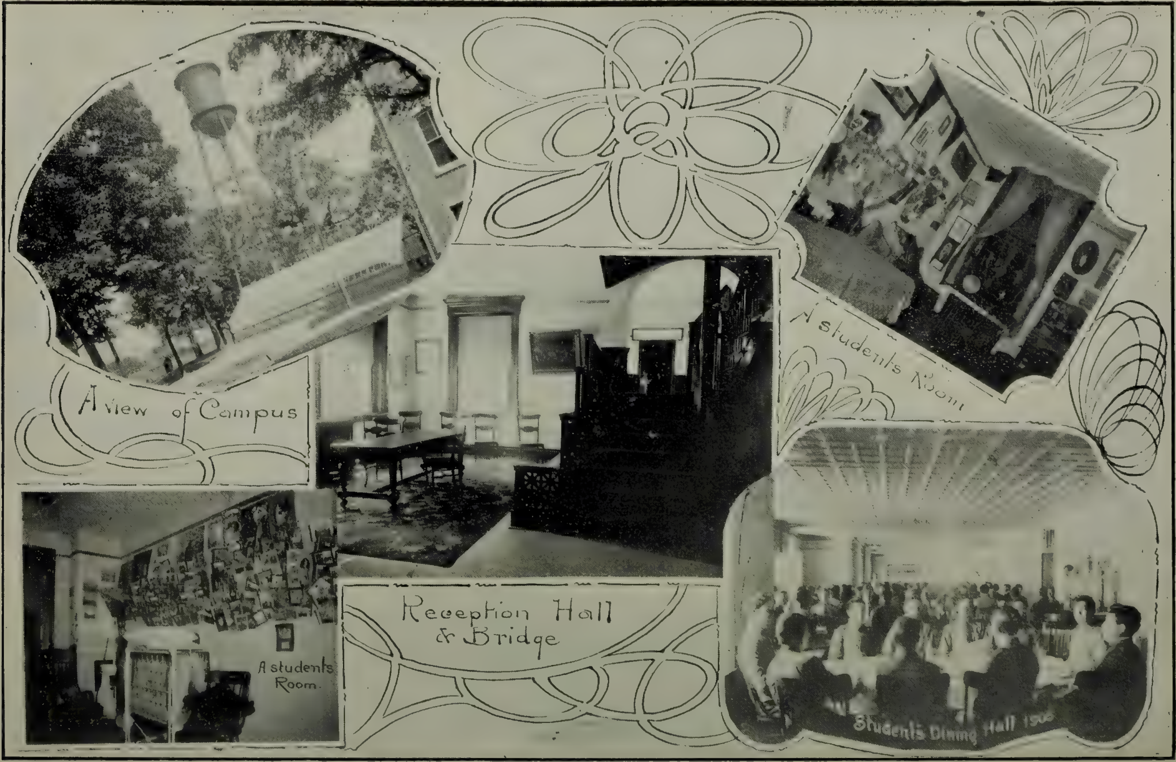
VIEW IN GROVE FROM BARRACKS,

LOOKING TOWARD THE AVENUE.

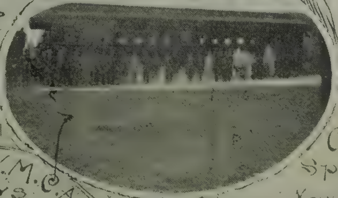

Ward in Sanitarium
Pumps in Boiler Room.
College Dynamo & Engine
A group of Surveying Instruments


A view of Campus
A students Room
Reception Hall & Bridge
A students Room.
Students Dining Hall 1906

Botany Class naming Specimens

Farmers in Corn Special listening to Lecture on Seed Corn. Hagerstown

Some Y. M. C. A. Boys 1905



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5—Chemical Department '97.
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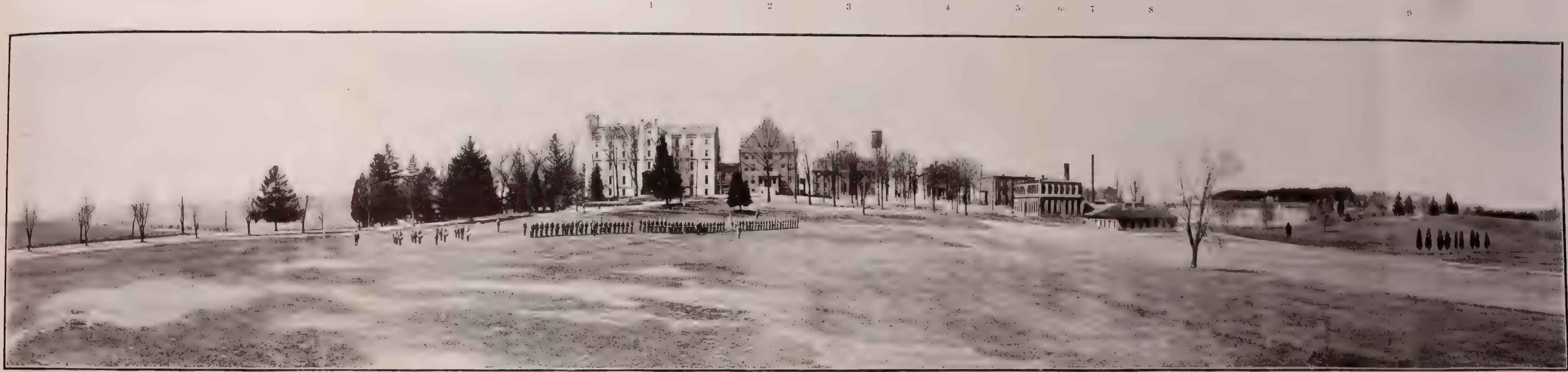

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1 Barracks '59.
2 Dormitory and Administration '04.
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Registrar and Treasurer.

W. O. EVERSFIELD, M. D.,
Surgeon.

MISS M. L. SPENCE,
Stenographer.

MRS. L. K. FITZHUGH,
Matron.

E. C. GREEN,
Steward.

W. HARRISON,
Executive Clerk.

CALENDAR FOR 1906-1907.

FIRST TERM.

September 18th and 19th—Entrance Examinations.

Thursday, September 20th, 1 P. M.—College Work Begins.

Friday, December 21st, noon—First Term Ends.

Friday, December 21st, noon, to Wednesday, January 2nd, noon—Christmas Holidays.

SECOND TERM.

Wednesday, January 2nd, noon—Second Term Begins.

Wednesday, March 27th—Second Term Ends.

THIRD TERM.

Wednesday, March 27th, noon, to Tuesday, April 2nd, 1 P M.—Easter Holidays.

Tuesday, April 2nd, 1 P. M.—Third Term Begins.

June 3rd to 8th—Final Examinations.

Sunday, June 9th—Baccalaureate Sermon.

Monday, June 10th—Class Day.

Tuesday, June 11th—Alumni Day.

Wednesday, June 12th, 11 A. M.—Commencement Day Exercises.

HISTORICAL SKETCH.

An act to establish and endow an agricultural college in the State of Maryland was passed by the legislature of the State in 1856 (see Laws of Maryland 1856, Chapter 97). At this time no other such institution of a similar character existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public spirited private individuals, the original College building was erected, and its doors opened to students in the fall of 1859.

For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land Grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part at least, a State institution, and such it is at the present time.

In 1892 the Federal Government passed a second act for the benefit of the agricultural and mechanical colleges. By the act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 was reached, was granted each State, to be applied to the further equipment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

In 1887 the Federal Congress passed an important act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

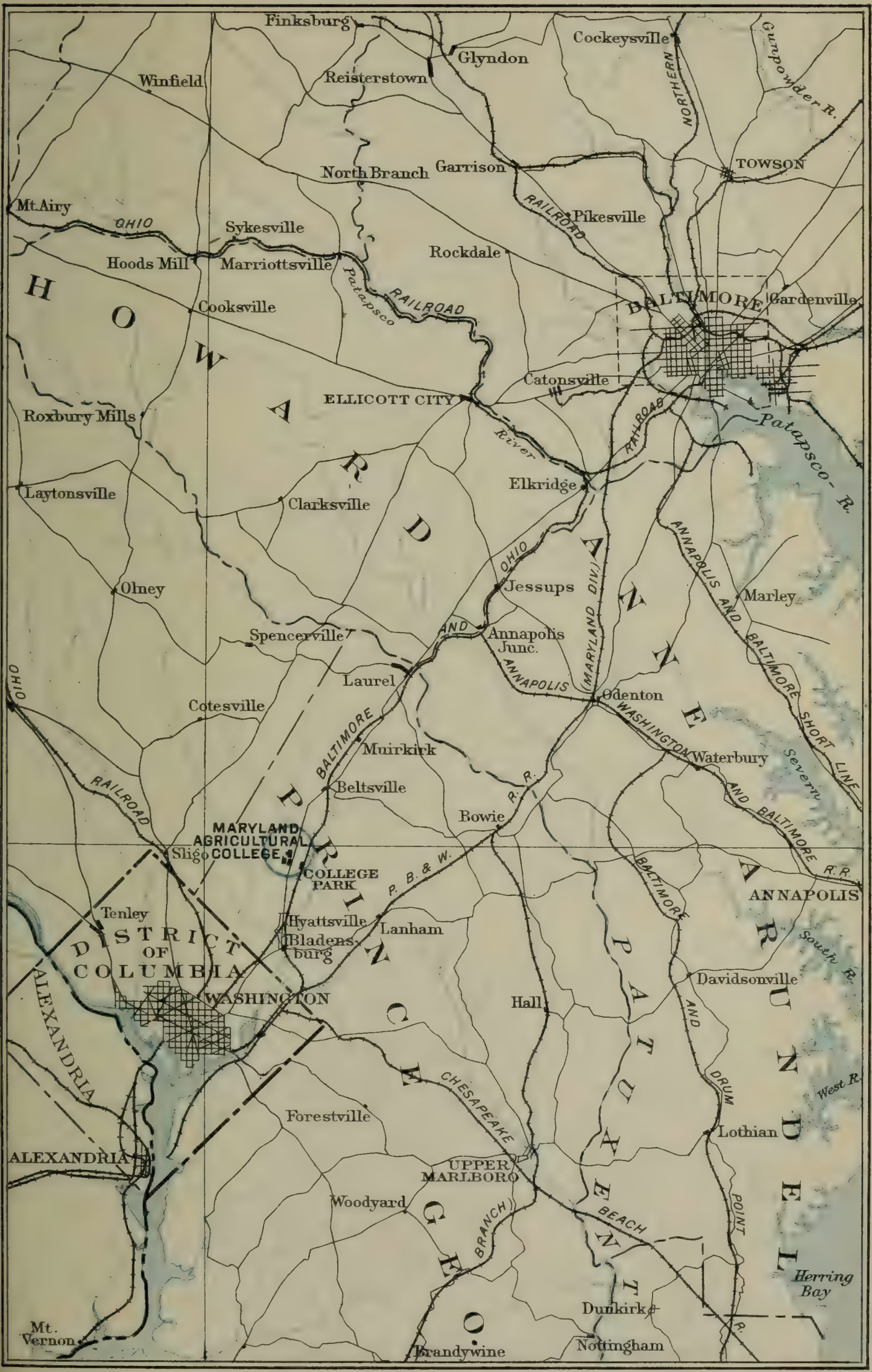
In 1906 Congress passed the Adams Bill, a measure of further assistance for the experiment stations of the several States. By this act there is granted a gradual increase in Federal support to the working funds for the experimental work of the stations (amounting to $15,000 additional in ten years).

During the last twelve years the history of the College has shown a record of steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory, the mechanical engineering building (recently enlarged), Morrill Hall, the college barn, the sanitarium and the new administration building and barracks as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Horticulture, Entomology and Vegetable Pathology, and of Chemistry (Fertilizer Control). Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

The State Bureau of Forestry, recently created, will cooperate with the College, the Director being Lecturer on Forestry at the Agricultural College, by the terms of his appointment.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George



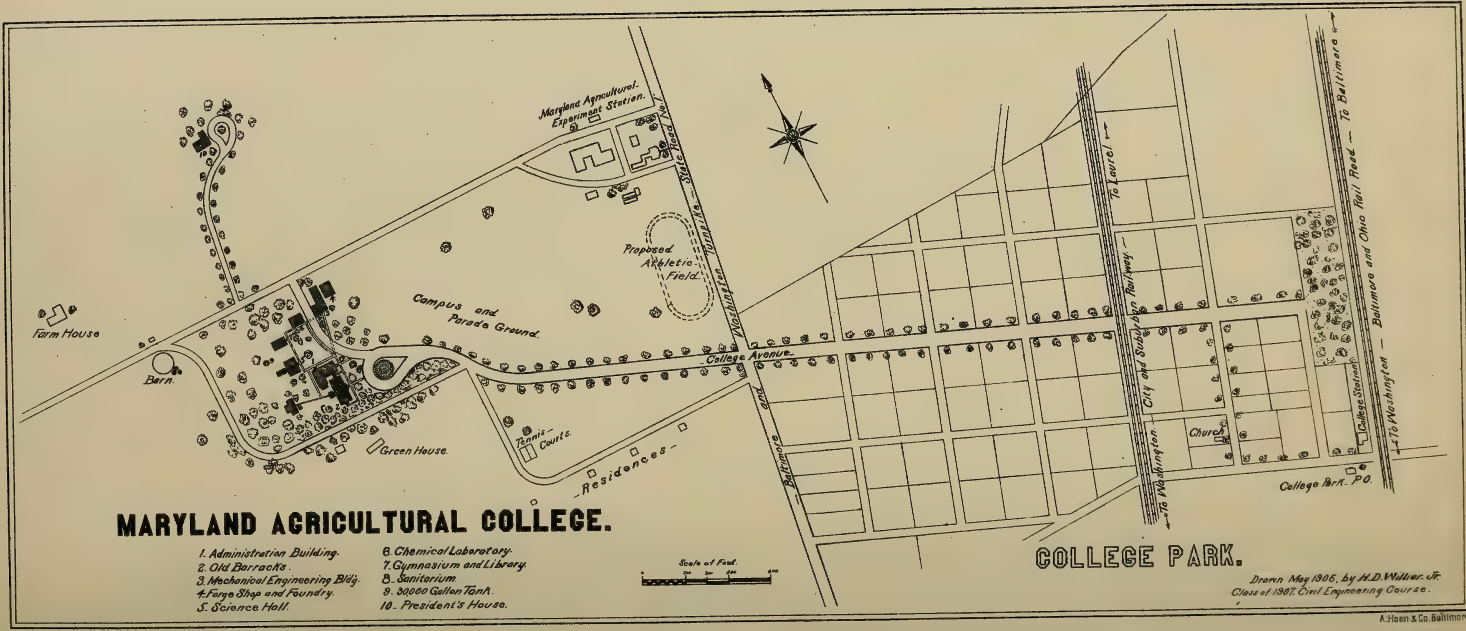
MAP SHOWING LOCATION OF

MARYLAND AGRICULTURAL COLLEGE.

A.Hoen & Co. Baltimore

8 7 6 5 4 3 2 1 0 8

8 miles = one inch



MARYLAND AGRICULTURAL COLLEGE.

1. Administration Building.
2. Old Barracks.
3. Mechanical Engineering Bldg.
4. Forge Shop and Foundry.
5. Science Hall.
6. Chemical Laboratory.
7. Gymnasium and Library.
8. Sanitarium.
9. 30000 Gallon Tank.
10. President's House.

Drawn May 1906, by H.D. Willier. Jr.
Class of 1907. Civil Engineering Course.

A. Hoen & Co. Baltimore

B. & O. R. R., eight miles from Washington and thirty-two miles from Baltimore. At least nine trains a day from each city stop at College Station thus making the place easily accessible from all parts of the State. The telegraph station, Hyattsville, is connected with the College by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south and Laurel the largest town in the county is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway. The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees and overlooking the entire surrounding country. In front extending to the turnpike is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres and is devoted to the gardens, orchards, vineyard and to general farming.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

COLLEGE BUILDINGS.

The College barracks is a five story brick building containing student quarters and the Domestic Department. The dormitories are large, well ventilated and provided with fire escapes, bath and water rooms. All the buildings are lighted with gas and electricity and heated with steam from central plants on the College grounds.

In 1892 the present building of the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is County, Maryland, on the line of the Washington Branch of the on the second floor and is large, well-lighted and convenient for the purpose.

The Mechanical Engineering Department is located in a two story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex, designed to afford additional facilities in forging and foundry work, which was erected and equipped during 1904. It is a model building of its kind.

The chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned by an Act of the General Assembly to the Professor of Chemistry at this College, who is thus the State Chemist.

Another addition to the group of College buildings is Morrill Hall, erected in 1898. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments have suffered, and greatly extending their opportunities for the development of high-grade scientific work. A greenhouse for work in entomology and vegetable pathology was erected in 1904.

The College Sanitarium, completed in 1901, has proven a most efficient means of isolating infectious diseases which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished with modern hospital facilities. An experienced nurse is in constant attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated and equipments secured.

Among recent improvements are additional dormitories, accommodating twice the number of students; an auditorium and offices in the Administration Building 1904; a complete renovation of the original College barracks; a modern steam heating plant; gas and electric lighting; lavatories; forced ventilation, etc., all of which establish quarters and class-rooms with unusually good sanitary arrangements.

Under the provisions of the acts of the last State Legislature a modern steam laundry will be added to the equipment and other needed improvements as required.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of general culture. The purpose of this College is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year his work consists wholly of a few closely connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical work-shops a student is able to become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS—EQUIPMENT AND COURSES OFFERED.

The following is a brief account of the equipment of the several departments of the College and the general character of the instruction given in each:

AGRICULTURAL DEPARTMENT.

W. T. L. TALIAFERRO, PROFESSOR.

B. E. PORTER, ASSISTANT IN ANIMAL HUSBANDRY.

The Agricultural Department offers three courses—(a) a four-years course leading to the degree of B. S.; (b) a two-years course, for proficiency in which a certificate is awarded; (c) a ten-weeks winter course.

The four-years course in agriculture is the same for all students through the Freshman, and Sophomore years. In the Junior begins a differentiation between those students who wish to specialize in agronomy and those who desire to specialize in animal husbandry.

Following is an outline of the work of the two sections:

OUTLINE OF FOUR-YEARS COURSE.

I. Lecture Course in Agriculture. This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers cannot fail to produce an excellent effect not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Students taking the Agricultural, Horticultural or General Science courses are required to attend these lectures. With other students, attendance is optional.

DIVISION OF AGRONOMY.

I. Farm Crops. In this course the production of farm crops is considered in detail, as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation, harvesting. The College farm of two hundred and sixty acres furnishes opportunity for practical work.

A special feature of this course is the study of crop improvement by selection and breeding. The first breeding plot of corn in Maryland was planted on the Experiment Station farm by College students, from seed ears selected and scored by them with the assistance of the instructor in agronomy. The same system of student work is used in all corn breeding and other crop growing experiments whenever practicable. Many students do overtime work, for which they are paid by the hour.

Morrow & Hunt's "Soils and Crops" is the text book used.

Sophomore Year, Third Term; 3 theoretical and 4 practical periods per week.

II. Soils. The study of the physical and chemical conditions of the soil in their relation to profitable agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text books, laboratory and field work No state in the union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

The text book used is "The Soil" by King.

Junior Year, Second and part of the Third Term; 4 theoretical and 4 practical periods per week.

III. Farm Drainage. Practical work in open ditching and under drains is provided for the students, on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

The text book used in this course is Waring's "Drainage for Profit and Health."

Junior Year, Third Term; 4 theoretical and 4 practical periods per week.

IV. FARM CROPS. This course is intended for those students only who are specializing in agronomy. It consists of field and laboratory work in the study of the handling of fall sown and fall harvested crops. Great attention is given in this course to a careful note-taking and study of the results obtained in breeding work in corn and other fall maturing crops on the Experiment Station farm.

Senior Year, First Term; 4 practical periods per week.

V. FERTILIZERS. Of vital interest to the eastern and southern farmer of the present day, is the fertilizer question. Between it and the profit and loss account is a very close connection and frequently a lack of knowledge of the subject entails upon the farmer both the loss of money paid and the possible increase of the crop. In this course the subject is developed logically from the needs of the plant and the efficiency of the soil to the selecting of the proper plant foods for each crop under varying conditions of soil and climate. Special attention is given to the home mixing of fertilizers.

Senior Year, Second Term; 3 theoretical and 4 practical periods per week.

VI. FARM MACHINERY. Lectures and practical work.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. FARM MANAGEMENT. Lectures.

Senior Year, Third Term; 2 periods per week.

VIII. ADVANCED WORK IN CROP PRODUCTION.

Senior Year, Third Term; 3 theoretical and 6 practical periods per week.

IX. ADVANCED WORK IN SOILS.

Senior Year, Third Term; 3 theoretical and 6 practical periods per week.

X. THESIS AND RESEARCH WORK, to be arranged for with the head of the department.

Senior Year, Second and Third Terms; 2 theoretical and 4 practical periods per week.

I. Live Stock and Score Card Practice. This course is devoted to the detailed study of the breeds of live stock. In the practical work especial attention is given to the relation of form to function. Market types are studied. Judging occupies three double periods, three afternoons per week.

"Horses, Cattle, Sheep and Swine" by Curtis and "Judging Live Stock" by Craig are used as text books.

Junior Year, First Term; 3 theoretical and 6 practical periods per week.

II. Principles of Breeding. This course takes up the principles of breeding, including selection, heredity, atavism, variation, fecundity, in-and-in breeding, cross breeding and a historical study of their results.

Text book: "Stock Breeding," Miles.

Junior Year, First Term; 3 theoretical periods per week.

III. Live Stock Management. The housing, feeding, care and management of dairy cattle and hogs (Second Term). The housing, feeding, care and management of horses, beef cattle and sheep (Third Term). The practical work in the spring term takes up the drawing of barn plans and other stable conveniences.

Junior Year, Second and Third Terms; 2 theoretical periods per week.

IV. Dairying. Text books: Wing's "Milk and Its Production," Russell's "Dairy Bacteriology."

Junior Year, Third Term; 3 theoretical and 4 practical periods per week.

V. Stock Judging. Special attention is paid to the judging of groups of animals, similar to county and state fair work.

Senior Year, First Term; 2 double periods per week.

VI. Herdbook. The herdbooks of the breeds of live stock are studied with a view of becoming acquainted with the pedigrees of the leading families of live stock, and the methods of recording the same.

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VII. Animal Nutrition. The course embraces the purpose of nutrition; the process of digestion and the theory and practical economy of rations for growth, fattening, milk or maintenance. Students should have completed courses in Agricultural Chemistry and Comparative Anatomy.

Senior Year, Second and Third Terms; 4 practical periods per week.

VIII. Thesis and Research Work. Upon lines and subjects to be arranged with the Department.

Senior Year, Second and Third Terms; 4 theoretical and 4 practical periods per week.

GEOLOGY.

I. Attention is given chiefly to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text book work, lectures and field excursions.

Shaler's "First Book in Geology" is used as a text book. The reports of the Maryland Geological Survey are used for reference.

Freshman Year, First Term; 4 periods per week; Second Term; five periods per week.

DEPARTMENT OF HORTICULTURE.

W. N. HUTT, PROFESSOR.
C. A. REED, ASSISTANT.
P. M. NOVIK, LECTURER.

The Horticultural Department offers a four-year course in practical horticulture, designed to train young men in the principles and practice of fruit and truck growing. In this work the orchard. nursery and vineyard of the Experiment Station are fully utilized, being of special value on account of the number of varieties represented. The work in floriculture is supplemented by trips to the establishments of successful greenhouse men in Baltimore, Washington, and vicinity. Similar trips to supplement the work on landscape gardening and truck growing are made from time to time.

Additional facilities and equipment are added annually to make the instruction and practice in horticulture thoroughly practical, efficient and up-to-date.

I. PRINCIPLES OF PLANT CULTURE. A discussion of elementary horticulture; the plant, its germination and growth; the tree, from root to fruit; the underlying principles of plant culture. Instruction and practice are given in the propagation of plants by budding, grafting, layering, and by cuttings.

Text book: "Principles of Plant Culture," Goff.

Sophomore Year, First Term; 6 periods per week.

II. POMOLOGY (FRUIT GROWING). Text books and lectures. A discussion of the principles underlying the growing of orchard fruits. The work begins with the origin of our cultivated fruits and the practical methods of propagating them. Next follows the study of locations for orchards and the planting of trees. General care and practice are given in the proper pruning of all classes of fruits. In the College nursery, the students will propagate all classes of nursery stock. The trees propagated become the property of the students.

Text book: "The Principles of Fruit Growing," Bailey. Reference: "American Fruit Culturist," Thomas.

Junior Year, First and Second Terms; 4 periods per week.

III. FLORICULTURE. Lectures and practical work. The construction and management of greenhouse structures. Instruction is given in the making of soils and in the propagation of foliage and flowering plants. Students are given practice in the various operations of commercial floriculture. They are required to name and propagate all varieties of plants in the College conservatories, the plants so produced becoming the property of the students.

Text book: "Practical Floriculture," Henderson. Reference: "The Nursery Book," Bailey; "Greenhouse Management," Taft; "Greenhouse Construction," Taft.

Junior Year, Second Term; 6 periods per week.

IV. Olericulture (Vegetable Gardening). The origin, history and botanical relations of garden vegetables. From economic points of view, a careful study is made of the location of gardens and truck farms, the requisites of soil, fertilizers and general cultivation. Study will be made of special truck crops for market and canning purposes. Instruction will be given in the forcing of early and tender vegetables and in the making and management of hotbeds and cold-frames.

Text book: "Vegetable Gardening," Green. Reference: "Truck Farming in the South," Oemler; "Vegetable Gardening in the South," Rolfs.

Junior Year, Third Term; 5 periods per week.

V. Fruit Harvesting, Storing and Marketing. A discussion of the profitable marketing of fruit products. How to pick, pack and grade fruit for domestic and foreign markets. A discussion of market methods, the middle man, pools and shipping associations, refrigerator cars and cold storage of fruit, the utilization of waste and by-products.

Text book: "Fruit Harvesting, Storing and Marketing," Waugh.

Senior Year, First Term; 3 periods per week.

VI. Systematic Pomology. An advanced study of pomology, including classes, varieties and types of economic fruits. Work is given in comparing, noting, and identifying varieties in all classes of fruits. This course is designed to take up the scientific rather than the practical side of fruit growing and to train students for the work of identifying and judging fruit and to fit them for taxonomic work in pomology in Colleges, Experiment Stations or in the United States Department of Agriculture.

Text book: "American Fruit Culturist," Thomas.

Senior Year, First Term; 5 periods per week.

VII. Plant Breeding. The underlying principles of plant improvement by breeding. The effect of favorable culture and environment in producing beneficial variations. The fixing of characteristics by selection, crossing and hybridization. Students will be given practice in the greenhouses and College orchards in the production of new and useful varieties.

Text book: "Plant Breeding," Bailey.

Senior Year, Second Term; 3 periods per week.

VIII. Small Fruit Culture. Lectures and practice in the propagation, planting, care and working of small fruits.

Text book: "Bush Fruits," Card.

Senior Year, Third Term; 4 periods per week.

IX. Landscape Gardening. The study of the principles of ornamental gardening, planning of lawns and grounds, making of lawns, laying out of walks and drives, use of ornamental trees and flowering shrubs, the designing of beds and borders, grouping of shrubbery, use of bulbous plants and hardy herbaceous perennials, beautifying of home grounds. Students on the completion of this course, must be familiar with all the trees, shrubs and plants used on the College lawns and campus.

Text book: "Principles of Landscape Gardening," Waugh.

Senior Year, Third Term; 2 periods per week.

X. Special Research Work. Time, subject and work to be arranged with each student individually. This work is given to the student to test his power of thought and initiative along the line of horticultural work.

Senior Year, Three Terms.

FORESTRY.

I. The study of trees under forest conditions. Methods of propagation and management. Wind breaks, shelter belts and forestry plantations. Trees in relation to water supply. Practical farm forestry. The government forestry policy in relation to irrigation, ranges, mines and timber supplies.

Text books: "First Book of Forestry," Roth; "Primer of Forestry," Pinchot.

Senior Year, Second Term; 3 periods per week.

DEPARTMENT OF BOTANY AND VEGETABLE PATHOLOGY.

J. B. S. NORTON, PROFESSOR.
FREDERICK H. BLODGETT, ASSISTANT.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture; for since plants are the subjects dealt with in the field and garden, the study of plant life must be one of the fundamental sciences upon which such work is based. In addition to the courses in pure botany, others of special economic trend are given especially for students in the agricultural and horticultural courses, taking up such botanical studies of cultivated plants, plant diseases, etc., as may be useful in practical life to the professional farmer or gardener.

The equipment and means for illustration and demonstration, consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants; microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Advanced students have opportunity to observe the work being done in the laboratory of Vegetable Pathology and greenhouse of the State Horticultural Department and, if competent, to assist in the same. Special attention is given to students who wish practice in the treatment of plant diseases, as it is the desire of the Department to encourage young men to engage in this work as a business.

I. General Principles. An elementary course in the general principles of anatomy, morphology and physiology of the higher plants. The structure and types of seed, root, stem, leaves, flower and fruit are studied in the laboratory, with a brief consideration of the functions of the different plant organs, a more complete course in plant physiology (III) being given later. This course is a necessary preparation for course II.

Leavitt's "Outlines of Botany" is the principle text book used.

Freshman Year, Second Term; 2 theoretical and 4 practical periods per week.

II. SYSTEMATIC BOTANY AND ECOLOGY. Principally field work with the manual on the native flora, and designed to give a knowledge of the names of the common Maryland plants and their position in the classification of the vegetable kingdom. The ecology of the plants examined in the field is also taken up, considering their relation to soils, water supply, light and other factors in their environment, cross pollination, dissemination of seeds, plant societies, etc. Each student makes a collection of at least fifty plants from some part of the State.

Reference books used: Britton's "Manual," Gray's "Manual" Britton & Brown's "Illustrated Flora."

Freshman Year, Third Term; 2 theoretical and 4 practical periods per week.

III. PLANT PHYSIOLOGY. Lectures and experiments on the life processes of plants; absorption and transfer of water and food materials, photosynthesis, respiration, growth, movement, reproduction, etc.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

IV. PLANT HISTOLOGY. Laboratory work with the compound microscope, studying the minute structure of the tissues and organs of the various types of plants. Each student prepares a series of sections for study with the microscope from which he makes a set of outline drawings.

Junior Year, Second Term; 8 practical periods per week.

V. COMPARATIVE MORPHOLOGY AND CLASSIFICATION. A comparative study of the structure and life history of the principal types of plants from the lowest to the highest. The exercises consist principally of lectures and microscopic studies in the laboratory. The outline of classification of Engler's Syllabus is followed in general.

Junior Year, Third Term; 2 theoretical and 6 practical periods per week.

VI. Economic Plants. Lectures on the names, classification, nativity and uses of the useful and detrimental plants of the world with field and laboratory studies of the common cultivated plants with a view of enabling the student of horticulture or agriculture to know the scientific names and relationship of the plants with which he comes in contact in his chosen work.

Reference works: Bailey's Gray's "Field, Forest and Garden Botany," Bailey's "Encyclopedia of Horticulture," etc.

Junior year, Third Term; 2 theoretical and 4 practical periods per week.

VII. Mycology. Lectures and laboratory work upon the common forms of fungi, with special reference enabling the student to recognize those causing plant diseases, and preparatory to VIII.

Text book: Underwood's "Molds, Mildews and Mushrooms."

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VIII. Vegetable Pathology. The causes, symptoms and means of control of plant diseases are studied by means of lectures, microscopic work in the laboratory and experiments in infection and treatment in field and greenhouse.

In addition to the lectures numerous reference books are used.

Senior Year, Second Term; 2 theoretical and 4 practical periods per week.

IX. Research. Students electing Botany as a major in the Senior year devote one term to a completion of an original study of some botanical subject upon which they prepare their graduation thesis.

Senior Year, Third Term; not less than the equivalent of 10 theoretical periods per week.

X. Elective courses for students of the General Science Course or for post-graduate students are offered in Methods in Plant Pathology, Botanical Microchemistry, Histology of Trees, Taxonomy or advanced work in any of the under-graduate courses before mentioned.

General Science students in Botany pursue their elective courses in the first and second terms of the senior year for not less than the equivalent of 10 theoretical periods per week and those pursuing Entomology as a major devote the equivalent of 3 theoretical periods per week throughout the year to Botany.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

T. B. SYMONS, PROFESSOR.
A. B. GAHAN, ASSISTANT.

Instruction is given in this Department with a view of giving the student first, a general knowledge of invertebrate and vertebrate zoology, which is necessary as a foundation science for an agricultural education. Second, to fit the student in elementary and advanced entomology, both economic and systematic in order that he may pursue this specialty after graduation. A course in economic entomology is given to provide those students who are specializing in any of the allied agricultural sciences with that information which is necessary to their ideal development.

Students wishing to take advanced work in invertebrate zoology here are advised to select some subject in entomology. As the State and Experiment Station entomological work is conducted through this department there are special advantages for students in applied entomology.

The department library contains the majority of the principal entomological publications which is a great help in advanced work. The laboratory is supplied with a large collection of insects for the use of students, and is fairly well equipped with microscopes and other apparatus necessary for practical work in entomology.

The Insectary of the State Horticultural Department and the Maryland Experiment Station which is joined to the laboratory, affords facilities to a limited number of advanced students for special investigation.

I. Entomology. Lectures, laboratory and field work. This course is designed as an introduction to all the other work in the department. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders and the more important families, the habits and life histories of insects with special reference to those species that are of economic importance. The laboratory and field work include the study of the more general features of insect anatomy, the determination of some common species and the collection and preservation of insects.

Sophomore Year, Third Term; 2 theoretical and 4 practical periods per week.

II. ZOOLOGY. Both invertebrate and vertebrate zoology are discussed in this course. For the time allowed, a very thorough study is made of the classification, anatomy, physiology, characteristics and habits of animals from the lowest to the highest forms. A representative of each of the larger groups is dissected in the laboratory. This course is designed to give the student a general knowledge of zoology.

Junior Year, First and Second Terms; 3 theoretical and 6 practical periods per week.

III. SYSTEMATIC ENTOMOLOGY. Open to students who have taken course I or equivalent. A thorough study of the structure, habits, life histories, and classification of insects. Intended for students wishing to make entomology a specialty.

Junior Year, First and Third Terms; 2 theoretical and 4 practical periods per week.

IV. ECONOMIC ENTOMOLOGY. Lectures on applied entomology. Discussion of the more important insect pests and the methods of combating them.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

V. ADVANCED ENTOMOLOGY. Open only to students who have completed II, III or equivalents. Morphology, and ecology of insects. Special and research work will depend upon the ability and special object of the student. This course is given for those who wish to pursue entomology as a profession. Students making botany their major subject will be required to take the equivalent of 3 theoretical periods per week in entomology.

Senior Year; 10 periods per week.

DEPARTMENT OF VETERINARY SCIENCE.

DR. SAMUEL S. BUCKLEY, PROFESSOR.

I. Microscopy. For students in Agricultural and General Science courses. Laboratory exercises in the use and care of the microscope. Methods of examination of fresh and permanent preparations.

Sophomore Year, Second Term; 4 periods per week.

II. Histology. For students in the agricultural and general science courses. The study of cells, and tissues and organs of the animal body. This course is preparatory to course III given in the Junior year.

Sophomore Year, Second Term; 8 periods per week.

III. Comparative Anatomy and Physiology. For students in the agricultural and general science courses. The elements of physiology with special reference to nutrition. Particular attention is given to the study of classes of animal foods and their digestion.

Junior Year, Second Term; 10 periods per week.

IV. Veterinary Elements. For students of the agricultural course, this is a required study.

Senior Year, Second Term; 12 periods per week.

Note A. Students of the first year in the Two Year Agricultural Course will receive instruction under III with the Junior Class, and those of the second year in this course will receive IV with the Senior Class.

Note B. Students of the Short Winter Course in Agriculture will receive instruction in practical veterinary matters and attend lectures upon diseases of animals, 2 periods per week.

DEPARTMENT OF CHEMISTRY.

DR. H. B. MCDONNELL, PROFESSOR AND STATE CHEMIST.

ASSISTANT IN COLLEGE WORK,
J. J. MORGAN.

ASSISTANTS IN STATE WORK.
WM. R. WHARTON, R. C. WILEY, J. W. PALMORE.

This department is charged with two distinct classes of work: (1) the State fertilizer and food inspection, and, (2) the instruction of students. The State work necessitates the publication of the "Quarterly" bulletin, which is usually made up of the results of the analyses of fertilizers or feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of the State work, the assistants being invariably college graduates. However, this work serves as a valuable object lesson to the advanced students.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room with first class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and materials are provided from the supply room, as needed.

The department is provided with a small but well selected library of standard reference books on chemistry to which additions are made from time to time.

Instruction in chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervison of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals, the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry which is essential in the education of every man, no difference what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Advanced work in chemistry begins with the Junior year, if the course in chemistry is selected, and the larger part of the student's time is devoted to some branch of theoretical or practical chemistry during the rest of his course, as outlined elsewhere.

The object of the full course in chemistry is to prepare the graduate for positions in agricultural colleges, experiment stations, the United States Department of Agriculture or in various industries that require the services of trained chemists. The demand for our graduates for such positions is far in excess of the supply.

I. GENERAL CHEMISTRY. Recitations and practical work in the laboratory where the student performs the experiments under the direction of the instructors. Qualitative analysis is started in this course.

The text book is Remsen's "Introduction to the Study of Chemistry."

Sophomore Year, Three Terms; 4 recitations, and 3 to 4 practical periods per week.

II. AGRICULTURAL CHEMISTRY. Text book: Snyder's "Chemistry of Plant and Animal Life."

Junior Year, First Term; 4 periods per week.

III. QUALITATIVE ANALYSIS. Text book: Seller's "Qualitatative Analysis."

Junior Year, First Term; 2 periods, lectures and recitation and 12 periods practical work per week.

IV. INORGANIC PREPARATIONS. The preparation and purification of inorganic compounds, fractional crystallization, etc.

Junior Year, First Term; 4 practical periods per week.

V. Quantitative Analysis. Easy analysis, such as the determination of water in gypsum, iron in wire, iron oxide from heating reduced iron, analysis of marble, etc. The work is selected to illustrate general principles.

Reference book: Fresenius' "Quantitative Analysis."

Junior year, Second Term; 1 lecture and 12 periods practical work per week.

VI. Mineralogy. This is a course in determinative mineralogy. The most important minerals are identified by their most characteristic physical and chemical properties, the blowpipe being an important aid.

Text book: Brush's "Determinative Mineralogy and Blowpipe."

Junior Year, Second Term; 1 lecture and 4 periods practical work.

VII. Organic Chemistry. Text book: Remsen's "Organic Chemistry."

Junior Year, Second and Third Terms; Senior Year, First Term. The first two terms will be mostly recitations and lectures while the last term will be mostly practical work in the laboratory.

VIII. Volumetric Analysis and Assaying. This course will be mostly Acidimetry and Alkalimetry, the determination of iron, chlorine, silver, etc., by volumetric methods; and the fire assay of gold, silver and lead ores.

Reference books: Sutton's "Volumetric Analysis" and Brown's "Assaying."

Junior Year, Third Term; 2 lectures and 16 periods practical work per week.

IX. Theoretical Chemistry. This course will cover the most important elements of this branch of the science, such as atomic and molecular weights, valence, solutions, etc.

Text book: Remsen's "Theoretical Chemistry."

Senior Year, First Term; 2 periods per week.

X. Agricultural Chemical Analysis. This is a thorough course in the analysis of fertilizers and fertilizing materials, feeding stuffs, butter, milk, sugar, starch, etc.

Text book: "Methods of Analysis of the Association of Official Agricultural Chemists."

Senior Year, First and Second Terms; 8 periods per week first term and 16 periods the second term.

XI. Industrial Physical and Electrolytic Chemistry. This course is intended to broaden the foundation of the student in chemistry and the parts of the subjects covered will be selected with special reference to the bearing on agricultural chemistry.

Reference books: Thorp's "Industrial Chemistry," Jones' "Physical Chemistry" and Smith's "Electrolytic Chemistry."

Senior Year, Second and Third Terms; 6 periods, lectures and recitations and 4 periods of laboratory work per week the second term, and 5 periods lectures and recitations during the third term.

XII. Research. This will occupy nearly all of the student's time in the laboratory. The results will be embodied in the graduating thesis.

Senior Year, Third Term; 20 periods per week.

The hours mentioned for practical work in the laboratory are intended to be the minimum. The best students put in considerably more time than this, the laboratories being open to advanced students till five o'clock in the evenings and on Saturdays till 12 o'clock. Energetic students are glad to avail themselves of these opportunities.

DEPARTMENT OF PHYSICS.

HENRY LANAHAN, PROFESSOR.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

I. Elementary Physics. The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied.

Text: Carhart & Chute's "High School Physics."

Sophomore Year, First and Second Terms; 2 periods per week.

II. Physics. The course begins with a review of mechanics, after which heat, sound, electricity and magnetism, and light are taken up successively by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation, and accuracy in making precise measurements. Written reports of the work done in the laboratory are required weekly.

Text books used: Ames' "Theory of Physics," and Ames and Bliss' "Manual Experiments in Physics."

Junior Year, Three Terms; 4 periods class-room work, and 4 periods laboratory work per week.

More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF CIVIL ENGINEERING.

HENRY LANAHAN, PROFESSOR.

The scope of the work of this department is indicated by the courses outlined below, which include theoretical and practical surveying, certain branches of applied mathematics, drawing, designing of structures, and engineering construction. Fundamental principles are emphasized, and an effort is made to develop in the student a habit of self reliance in the application of these principles. Opportunity is given for considerable practice in the use of surveying instruments and in drafting. At present the instruction in drawing, graphic statics and structural designing is given by the Mechanical Engineering Department. The subjects named below form a part of the required work in the course in Civil Engineering and the complete curriculum of the course is to be found in the Outline, page 61 of this catalogue.

I. SURVEYING. The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; dividing of land; the theory of the stadia; true meridian lines; leveling; topographical surveying; railroad curves and cross sectioning. The department is equipped with two surveyor's compasses, a Gurley transit with solar attachment, and a 20 inch Gurley level.

Texts: Raymond's "Plane Surveying," and Pence & Ketchum's "Field Manual."

Junior Year, Three Terms; 2 periods per week class-room work, three periods per week field practice.

II. TOPOGRAPHICAL DRAWING. Practice in free-hand lettering, maps, profiles, topography, etc.

Junior Year, Three Terms; 6 periods per week first term; 4 periods per week, second and third terms.

III. GRAPHIC STATICS. Including the theory and practice of the graphical methods of determining stresses in frame structures, particularly roof trusses, and bending movements and shears in beams. This course is based on Hoskins' "Graphic Statics," and many of the problems are solved analytically as well as graphically.

Senior Year, First Term; 4 periods per week.

IV. STRUCTURAL DESIGNING. Including roofs and bridges. Text book: Thompson's "Bridge and Structural Design."

Senior Year, Three Terms; 6 periods per week.

V. STRENGTH OF MATERIALS. Treating of the elasticity and resistance of materials of construction and the mechanics of beams, columns and shafts.

The text used is Merriman's "Mechanics of Materials." A knowledge of integral calculus is required for entrance to the course.

Senior Year, First Term; 4 periods per week.

VI. HYDRAULICS. Text book: Merriman's "Hydraulics." Senior Year, Second and Third Term; 2 periods per week.

VII. RAILWAY ENGINEERING. Preliminary and location surveys, cross sectioning, calculation of quantities, etc.

Text book: Searles' "Field Engineering."

Senior Year, First Term; 2 periods per week class-room work, 8 periods per week field work.

VIII. HIGHWAY ENGINEERING. Location, construction and maintenance of roads.

Texts: Spalding's "Roads and Pavements" and the reports of the Highway Division of Maryland Geological Survey.

Senior Year, Third Term; 3 periods per week.

IX. PRACTICAL PROBLEMS IN SURVEYING AND ENGINEERING. In 1904-'06 the work was as follows: Location of a spur track from the B. & O. R. R. to the College; design of a drainage system for agricultural purposes for a portion of the College farm; location of a true meridian line by several methods; location of electric railway to College; plan for athletic field.

DEPARTMENT OF MECHANICAL ENGINEERING.

J. HANSON MITCHELL, PROFESSOR.*
HARRY GWINNER, ACTING PROFESSOR.
E. F. GARNER, ASSISTANT.

This department offers a course to those who desire to prepare themselves to design and construct machinery or superintend engineering establishments. With this end in view an education is offered based on theoretical mechanics, drawing, mathematics, physics and modern languages, together with a practical training in the uses of tools and machinery. The allied subjects of the course taught outside of the department and the hours alloted to each will be found in the outline on page 59.

The course leads to the degree of B. S. in Mechanical Engineering upon the satisfactory completion of the work of the four years as outlined.

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*On leave of absence.

Equipment. The Mechanical Engineering Laboratories consist of a two story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and two lecture rooms; a one story brick building, in which is the forge shop and foundry, and an annex, 25 feet by 50 feet, containing the boilers, which furnish steam for power, heat and experimental purposes, and the electric lighting equipment.

The wood-working shop contains accommodations for students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grindstone.

In the forge shops are sixteen power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths' tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour; a brass furnace, one Mellett core oven, and with the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 20-inch Field engine-lathe, with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine-lathes, one 24-inch Gray planer, one 16-inch Smith and Mills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

An 8- by 12-inch engine drives the machinery of the wood-working and machine shops. It was presented to the College by the City of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy. A 10-horse-power Fairbanks gasoline engine drives the blowers in the foundry and forge shops.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue-print facilities.

I. Mechanical Drawing. Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being enclosed in covers properly titled by the students.

Text-book: Rouillion's "Mechanical Drawing."

Freshman Year, Three Terms; 6 periods per week.

Ia. FREEHAND DRAWING. Straight and curved lines, lettering, leaves, plants and ornaments.

Freshman Year, Third Term; 6 periods per week.

II. TECHNICAL INSTRUCTION. Explanation of the reading of mechanical drawings; the proper cutting angles, care and adjustment of carpenter tools; relative strength of wood joints; wood, its shrinking and warping, and how to correct and prevent. Drill in problems in Arithmetic, Algebra and Drawing by notes and lectures.

Text book: Goss' "Bench Work in Wood."

Freshman Year, First Term; 5 periods per week.

III. WOOD WORK. Use and care of carpenter tools, exercises in sawing, mortising, tenoning, laying out work from drawings, wood turning and pattern making.

Freshman Year, Three Terms; 6 periods per week.

IV. MECHANICAL DRAWING. Free hand sketching of details of machinery and drawing to scale from these sketches. Tracing and blue printing, and representation of flat and round surfaces by ink shading.

Text book: Rouillion's "Mechanical Drawing."

Sophomore Year, Three Terms; 6 periods per week first term, 4 the second and 5 the third.

V. ELEMENTARY APPLIED MECHANICS. Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting, and bending movements of beams.

Jamieson's "Applied Mechanics" is the text used.

VI. BLACKSMITHING AND FOUNDRY WORK. The elementary operations of drawing out, upsetting, bending and welding of iron and making and tempering of steel tools, moulding and casting in iron, and the management of the cupola.

Sophomore Year, Second and Third Terms; 3 periods per week.

VII. DESCRIPTIVE GEOMETRY. Its relation to mechanical drawing and the solution of problems relating to magnitudes in space bearing directly upon those principally used by the mechanical engineer.

Text book: Fauce's "Descriptive Geometry."

Sophomore Year, Second and Third Terms; 3 periods per week, second term, 2 the third.

VIII. ELEMENTARY MACHINE DESIGN. The designing of bolts, screws and nuts. Calculations and drawings of a simple type of steam engine. Notes and lectures.

Junior Year, Three Terms; 6 periods per week.

IX. MACHINE WORK. Elementary principles of vise and machine work, which include turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

Junior Year, Three Terms; 6 periods per week.

X. STEAM ENGINES AND BOILERS. The principles of steam and the steam engine, the slide valve and valve diagrams, the indicator and its diagram; steam boilers, the various types and their advantages, including the methods of construction.

Text used is Jamieson's "Steam and Steam Engines."

Junior Year, First Term; 4 periods per week.

XI. POWER PLANTS. Lectures on the location, construction, equipment and engineering of power plants.

Text book: Hutton's "Mechanical Engineering of Power Plants."

Senior Year, Second Term; 2 periods per week.

XII. MACHINE DESIGN. The calculation and design of pipes, belt and tooth gearing, beams and cranes.

Text book: Low & Bevis' "Machine Drawing and Design."

Senior Year, Three Terms; 4 periods per week the first term, 6 the second, and 4 the third.

XIII. Machine Shop Work. Advanced machine work; the laying out, assembling and construction of some piece of machinery such as an engine-lathe or dynamo.

Senior Year, Three Terms; 8 periods per week the first term, 10 the second, and 10 the third.

XIV. Testing. A course in experimental engineering; oil testing, determining the coefficient of friction, the calibration of the planimeter and steam guages, slide valve setting and indicator practice, the slide rule, and determining the amount of moisture in steam. The members of the class go to Baltimore or Washington for the purpose of inspecting well-known manufacturing plants.

Senior Year, Third Term; 6 periods per week.

DEPARTMENT OF MATHEMATICS.

R. W. SILVESTER, PROFESSOR.

HENRY T. HARRISON, ASSISTANT.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in Mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of buisness forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

I. Elementary Mathematics. General Review.
Freshman Year, First Term; 3 periods per week.

II. Algebra. Text book: Wentworth's "College Algebra."
Freshman Year, Three Terms; 5 periods per week.

III. Plane Geometry. Text book: Wentworth's "Plane Geometry."
Freshman Year, Third Term, Sophomore Year, First Term; 5 periods per week.

IV. Solid Geometry. Text book: Wentworth's "Solid Geometry."
Sophomore Year, Second Term; 5 periods per week.

V. Trigonometry. Text book: Wentworth's "Plane Trigonometry."
Sophomore Year, Third Term; 5 periods per week.

VI. Analytical Geometry. Text book: Wentworth's "Analytics."
Junior Year, First Term; 5 periods per week.

VII. Differential Calculus. Text book: Osborne's.
Junior Year, Second Term; 5 periods per week.

VIII. Integral Calculus. Text book: Osborne's.
Junior Year, Third Term; 5 periods per week.

DEPARTMENT OF ENGLISH AND CIVICS.

F. B. BOMBERGER, PROFESSOR.

CHARLES S. RICHARDSON, ASSISTANT.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. Clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature, English and American, theoretical and practical rhetoric, logic, psychology, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first year is devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

I. Language and composition. English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Work in composition consists of the preparation of twelve themes upon assigned topics.

Texts used: Lockwood's "Lessons in English," Buehler's "Exercises in English" and Swinton's " Word Analysis."

Freshman Year, Three Terms; 5 periods per week.

II. American Literature. A study of the most important writers with a view to giving the student an exact knowledge of their works.

Text used: Watkin's "American Literature."

Freshman Year, Third Term; 3 periods per week.

III. RHETORIC AND COMPOSITION. Principles and practice of rhetoric and composition. Work in rhetoric consists of a study of the principles of diction, the sentence, the paragraph, the discourse, forms of prose, and the nature, form and structure of poetry.

Work in composition consists of twelve themes, illustrating special processes.

Text used: Lockwood's and Emerson's "Composition and Rhetoric."

Sophomore Year, First and Second Terms; 4 periods per week.

IV. ENGLISH LITERATURE. Study of the history and chief writers of English literature.

Text used: Stopford's Brooke's "English Literature."

Sophomore Year, Third Term; 3 periods per week.

V. COMPOSITION. Practice in English Composition. Special lectures. Work in composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the third term.

Junior Year, Third Term; 1 period per week.

VI. ENGLISH LITERATURE. Text books: Pancoast's "English Literature," Halleck's "English," and Taine's "English Literature.

Junior Year, First Term; 5 periods per week.

VII. AMERICAN LITERATURE. Text book, lecture and composition.

Text used: Pattee's "American Literature."

Senior Year, Second Term; 5 periods per week.

VIII. LOGIC. Principles and practice of logic.

Text used: Jevon's Hill's "Logic."

Junior Year, Third Term; 5 periods per week.

IX. ENGLISH CLASSICS. Critical study of English classics, following the outline for college entrance requirements in English.

Senior Year, Three Terms; 4 periods per week.

X. Psychology. Principles of Psychology. Text book and lectures.

Text used: Dewey's "Psychology."

Senior Year, First Term; 4 periods per week.

XI. Composition. Advanced work in English Composition. Special lectures. Eight themes illustrating special processes.

Senior Year, Three Terms; 1 period per week.

HISTORY COURSES.

I. Ancient History. Outlines of ancient history. Text book and lectures.

Text used: Myers' "Ancient History."

Freshman Year, First and Second Terms; 4 periods per week.

II. English History. Study of the outlines of English history.

Text used: Montgomery's "English History."

Freshman Year, Third Term; 3 periods per week.

CIVICS COURSES.

I. Political Science. Government; special lectures on Constitution of Maryland.

Text books used: Wilson's "The State," and Bryce's "American Commonwealth."

Junior Year, First Term; 5 periods per week.

II. Civics. Civil Government in the United States.

Text books used: Fiske's "Civil Government," Hindsdale's "American Government," and Clark's "Outline of Civics."

Junior Year, Second and Third Terms; 3 periods per week.

III. Business Law. Lectures on "Business Law" as used in everyday life.

Text used: Parson's "Commercial Law."

Senior Year, First Term; 3 periods per week.

IV. Political Economy. Principles of political economy and industrial development of the United States, economic science and current problems.

Text used: Walker's "Political Economy."

Senior Year, Second and Third Terms; 4 periods per week.

DEPARTMENT OF LANGUAGES.

THOMAS H. SPENCE, PROFESSOR.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German; only students of the Classical Course are required to take Latin. Students in the General Science Course may elect to take Latin in the Freshman and Senior years.

The course of study in Latin is given with two ends in view—first, to train the mind into accurate and close methods of reasoning; second, to give the student a more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin forms and terminations. The translation work of the course consists of selections from Sallust, Virgil, Cicero, Horace, Cæsar, Ovid, Livy, Juvenal, Tacitus and Terence.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, frequently there are no English versions of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the special line of work, which he may be pursuing. The study of French (I, II) is offered as an option in the Senior year.

LATIN COURSES.

I. GRAMMAR AND COMPOSITION. For students of the Freshman class who elect Latin in place of History.

The aim of this course is to give the student a familiarity with Latin forms and terminations, and enable him to read simple Latin prose.

Text books: Gildersleeve's "New Latin Primer," Collier and Daniel's "First Year Latin, or Bingham's "Latin Grammar."

Freshman Year, Three Terms.

II. Translation and Composition. Text book: Chase and Stuart's "Livy." Latin Prose Composition based on text read.

Senior Year, First Term; 6 periods per week.

III. Translation. Lectures on Latin grammar.

Text book: West's "Terence."

Senior Year, Second Term; 6 periods per week.

IV. Translation. In this course an essay on "Roman Morals" or some like subject written in Latin is a part of the required work.

Text book: MacLeane's "Juvenal."

Senior Year, Third Term; 6 periods per week.

GERMAN COURSES.

I. Grammar and Conversation. Text book: Otis' "Elementary German."

Sophomore Year, Third Term; 6 periods per week.

II. Translation. Text books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's, "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europeas," Walther's "Algemeine Meereskunde," Northrup's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Junior Year, Three Terms; 3 periods per week.

III. Translation of Scientific German. Selected readings from various texts and periodicals.

Senior Year, First and Second Terms; 4 periods per week.

FRENCH COURSES.

I. Grammar and Composition. Text book: Whitney's "French Grammar."

Sophomore Year, First Term; 4 periods per week.

II. Translation. Text books: Super's "French Reader," Rougemont's "La France," Fenelon's Telemaque," Herdler's "Scientific French Reader," also French scientific periodicals.

Sophomore Year, Second and Third Terms; 4 periods per week.

DEPARTMENT OF PUBLIC SPEAKING.

CHARLES S. RICHARDSON, PROFESSOR.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

I. Articulation, accent, modulation, force and elocutionary pause; expressive management of the body, attitude and motion. Selections of poetry and prose are read and declaimed by students.

Freshman Year, First Term; 1 period per week.

II. Simple lectures on orators and oratory. Methods of analysis and subjects for orations. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Freshman Year, Second Term; 2 periods per week.

III. A review of all the work of the Freshman Year. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc). Lectures on ancient and modern orators, with readings and declamations, by students, from orations.

Sophomore Year, First Term; 1 period per week.

IV. Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day as Tariff, Currency, Territorial Expansion, Trades Unions, Trusts, Isthmian Canal, etc. Lectures on parliamentary law.

Sophomore Year, Second Term; 2 periods per week.

DEPARTMENT OF PHYSICAL CULTURE.

CHARLES S. RICHARDSON, DIRECTOR.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastic and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory, Freshman and Sophomore years. Three periods per week, Preparatory, Freshman and Sophomore years.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

MILITARY DEPARTMENT.

EDWARD LLOYD, MAJOR, U. S. A., COMMANDANT.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

DISCIPLINE.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent, and his parents or guardian must at once remove him from the College.

MILITARY PROMOTIONS.

The awarding of commissions of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class. These officers are required to serve for the year, performing all duties imposed by the regulations of the College as a part of their regular course of training. Their conduct as officers will be rated as a study, having a value of five (5) theoretical periods per week, and a quarterly grade will be given. Failure to perform such duties shall constitute a deficiency, causing forfeiture of both diploma and commission. All members of the Senior Class will be required to perform these duties. All seniors with quarters in barracks will be required to drill either as officers or privates. Sergeants are selected from the Junior Class, and corporals from the Sophomore Class. Exceptions will be made to this order, only when the number of men in any one class qualified for promotion is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

UNIFORM.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

PREPARATORY DEPARTMENT.

HENRY T. HARRISON, PRINCIPAL.
CHARLES S. RICHARDSON, ASSISTANT.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

I. ARITHMETIC. Wentworth's "Grammar School Arithmetic," completed.
First and Second Terms; 10 periods per week.

II. ARITHMETIC. Advanced work.
Third Term; 5 periods per week.

III. ALGEBRA. Wentworth's "Algebra" as far as quadratics.
Three Terms; 5 periods per week.

IV. HISTORY. United States History, completed.
Three Terms; 5 periods per week.

V. GEOGRAPHY. Descriptive Geography, completed.
First Term; 5 periods per week.

VI. GEOGRAPHY. Davis's "Physical Geography." Completed.
Second and Third Terms; 5 periods per week.

VII. ENGLISH. Spelling, technical grammar, parsing, and analysis, composition, letter writing and elocution.
Three Terms; 8 periods per week.

VIII. Book-keeping. Single Entry.
Third Term, 5 periods per week.

THE COLLEGE LIBRARY.

F. B. BOMBERGER, LIBRARIAN.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a large number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey, Weather Service, and Highway Commission; the United States Department of Agriculture, Bulletins, Year Books and daily Weather Maps; and the county press for copies of their publications.

COURSES OF STUDY.

In order to systematize the work of the different departments of the College, and as far as possible arrange for specialization within limits consistent with the normal development of individual students, six distinct courses of study have been prepared, one of which the student is expected to choose upon entering the regular college work.

These courses are Agriculture, Horticulture, General Science, Chemistry, Mechanical Engineering and Civil Engineering.

A continuous and progressive course of work, beginning in the Freshman year with a nearly uniform course for all students and gradually separating in the three succeeding years until the class-work is almost wholly specialized has been found to be most satisfactory. A broad and liberal foundation in English, fundamental mathematics and history is first laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the tabular statement of the courses the hours per week are given, the numbers in parenthesis denoting practical or laboratory periods, others theoretical or recitation periods.

AGRICULTURAL COURSE.

The agricultural course is designed to fit the student for conducting practical operations on the farm or should taste or circumstance so direct to successfuly prosecute advanced scientific research along the lines of agronomy or animal husbandry. With this end in view the course has been made at once comprehensive and technical, comprehensive enough to include whatever is necessary for the complete development of the work yet technical enough to make the student feel that he is a specialist and equipped for special work.

The agricultural course is the result of development. While a man must specialize to attain any eminent success, yet in agricultural science it is not possible to specialize to the same degree as in some others, because it is itself made up of many sciences. Experience has clearly shown also that in agriculture the practical must keep even pace with the theoretical, that true education trains the eye and hand as well as the intellect and should give to the student the ability not only to acquire and originate ideas but also to express them in words and deeds.

Throughout the Freshman year and the first two terms of the Sophomore year the course is non-technical.

At the beginning of the third term of the Sophomore year, agronomy, the production of farm crops is taken up by all students of agriculture. The work of the course up to the close of the Sophomore years is as follows:

AGRICULTURAL COURSE, FIRST TWO YEARS.

Numbers in parentheses denote practical or laboratory periods.

FRESHMAN	TERMS			SOPHOMORE	TERMS		
	I	II	III		I	II	III
Eng. Lan. & Comp. (Eng. I)	5*	5	5	Rhetoric (Eng. III)	4	4	....
Amer. Lit. (Eng. II)	....	......	3	Eng. Lit. (Eng. IV)	....	......	3
Elemen. Math. (Math. I)	3	......	......	Plane Geom. (Math. III)	5	......	....
Algebra (Math. II)	5	5	5	Solid Geom. (Math. IV)	....	5	....
Plane Geom. (Math. III)	....	......	5	Trigonometry (Math. V)	....	......	5
Ancient Hist. (Hist. I)†	4	4	......	Chem. (Chem. I)	4(3)	4(4)	4(3)
Eng. Hist. (Hist. II)	....	......	4	Gen. Physics (Phys. I)	2	2	....
Drawing (M. E. I)	(6)	......	......	Plant Cult. (Hort. I)	4(2)	......	....
Geology (Geo. I)	4	5	......	Microscopy (Vet. Sci. I)	....	(4)	....
Agricult. Lect.	1	1	1	Histology (Vet. Sci. II)	....	(8)	....
Elocution (Pub. Sp. III)	1	1	......	Farm Crops (Agr. I)	....	......	3(4)
Phys. Cult.	(3)	(3)	......	Plant Phys. (Bot. III)	....	2(4)	....
Woodwork (M. E. III)	....	......	(6)	Drawing (M. E. IV)	(6)	......	....
Botany (Bot. I, II)	....	2(4)	2(4)	Ele. of Ento. (Ent. I)	....	......	2(4)
				Eloc. (Pub. Sp. III, IV)	1	2	....
				Agr. Lect.	1	1	1
				German (Ger. I, II)	....	......	5(1)

*Hours per week.
†Latin may be substituted for history, same number of periods per week.

In the Junior year the course is divided into two sections known as the Division of Agronomy and the Division of Animal Husbandry. This arrangement enables the student to specialize along which ever line accords with his interests or desires, while at the same time he is taught the fundamental facts of both. This enables him to see most clearly and to harmonize his work to the relations which must exist between these great branches of agriculture.

The detailed work of the Junior and Senior years in each division follows.

AGRICULTURAL COURSE, LAST TWO YEARS.

AGRONOMY SECTION.

JUNIOR YEAR	TERMS			SENIOR YEAR	TERMS		
	I	II	III		I	II	III
Surveying (C. E. I)	2(3)	2(3)	2(3)	German (Ger. III)	4	......	....
Agr'l Chem. (Chem. II)	4	......	......	Organ. Chem. (C. VII)	3(4)	......	....
Qual. Quant.. Anal. (Chem. III, IV, V)	4(6)	3(4)	......	Theoret. Chem. (C. IX)	2	......	....
				Eng. Classics (Eng. IX)	4	4	4
Volumetric Anal. & Assay (Chem. VII)	....	......	3	Psychology (Eng. X)	4	......	....
				Bus. Law (Civics III)	3	......	....
Animal Breeds (A. H. I)	3(6)	......	......	Pol. Econ. (Civics IV)	....	4	4
Principles, Breeding (A. H .II)	3	......	......	Farm Crops (Agr. IV)	2(4)	......	....
Stock Manag. (A. H. III)	....	2	......	Fertilizers (Agr. V)	....	3(4)	....
Ec. Ento. (Ent. IV)	....	......	2(4)	Farm Machin. (Agr. VI)	....	......	2(4)
Econ. Plants (Bot. V)	....	......	2(4)	Farm Manag. (Agr. VII)	....	......	2
Soils (Agr. II)	....	4(4)	2(2)	Crop Product. (Agr. VIII) or. Soil Work (Agr. IX)	....	......	3(6)
Drainage (Agr. III)	....	......	2(2)				
Civics (Civ. II)	....	3	3	Plant Breeding (Hort. VII)	....	3	....
German (Ger. II)	3	3	3	Plant Path. (Bot. VIII)	....	2(4)	....
Eng. Compos. (Eng. V)	1	1	1	Forestry (For. I)	....	3	....
Agr. Lect.	1	1	1	Research	....	2(4)	2(4)
				Agr. Lect.	1	1	1
				Eng. Comp. (Eng. XII)	1	1	1

AGRICULTURAL COURSE, LAST TWO YEARS. ANIMAL HUSBANDRY SECTION.

JUNIOR	TERMS			SENIOR	TERMS		
	I	II	III		I	II	III
Breeds, Scoring (A.H. I)	3(6)	......	......	Stock Judg. (A.H. V)	(4)	......	....
Princs. Breeding (A.H. II)	3	......	......	Herdbooks (A.H. VI)	2(2)	......	....
Stock Manag. (A.H. III)	....	2	2(2)	Anim. Nutri. (A.H. VII)	....	4	4(4)
Dairying (A.H. IV)	....	......	3(4)	Org. Chem. (Ch. VII)	3(?)	......	....
Zool. (Ent. II)	3(6)	......	......	Vet. Elem. (V.S. IV)	....	4(8)	....
Agr. Anal. (Chem. II)	4	......	......	Plant Breed. (Hort. VII)	....	3	....
Qual. & Quant. Anal. (Chem.				Farm Manag. (Agr. VII)	....	......	2
III, IV, V)	(6)	3(4)	3	Bus. Law (Civics III)	3	......	....
Soils (Agr. II)	....	4(4)	2	Pol. Econ, (Civ. IV)	....	4	4
Drainage (Agr. III)	....	......	2	Eng. Classics (Eng. IX)	4	......	4
Comp. Anat. & Phys. (V.S. III)	....	(10)	......	Forestry (F. I)	....	3	....
Ec. Ent. (Ent. IV)	....	......	2(4)	Research	....	4(4)	4(4)
German (Ger. II)	3	3	3	Eng. Comp. (E. XII)	1	1	1
Civics (Civ. II)	....	3	3	Agl. Lect.	1	1	1
Eng. Comp. (Eng. V)	1	1	......	German (Ger. III) or Psychol.			
Agl. Lect.	1	1	1	(Eng. X)	4	......	....

TWO YEARS COURSE IN AGRICULTURE.

The two-years course in agriculture is intended for young men who have definitely determined to devote themselves to farming, but not having the time to take the four-years course wish to gain the greatest possible amount of such instruction as will give the most assistance in their chosen profession.

It embraces nearly all of the strictly technical work of the four-years course and in addition other work which will aid the practical farmer, as for instance a course in blacksmithing and in vegetable culture.

Upon completion of this course a certificate is granted, taking the place of the diploma for the four-years course.

The details are indicated in the following schedule.

TWO YEARS COURSE IN AGRICULTURE.

FIRST YEAR	TERMS			SECOND YEAR	TERMS		
	I	II	III		I	II	III
Arithmetic (Math. I)	5	......	......	Farm Crops (Agr. I)	(4)	......	....
Plant Culture (Hort. I)	4(2)	......	......	Pomol. (Hort. II)	2(2)	2(2)	....
Farm Crops (Agr. I)	....	2(2)	2(4)	Princ. Breeding (A. H. II)	3	......	....
Soils (Agr. II)	....	4(4)	2(2)	Stock Judg. and Herd Book			
Drainage (Agr. III)	....	......	2(2)	(A. H. V, VI)	2(6)	......	....
General Chem. (Chem. I.)	4(3)	4(4)	4(3)	Fertilizers (Agr. V)	....	3(4)	2(2)
Breeds and Scoring (A. H. I)	3(6)	......	......	Farm Mach. (Agr. VI)	....	......	2(4)
Stock Manag. (A. H. III)	....	2	2(2)	Floricult. (Hort. III)	....	2(2)	....
Dairying (A. H. IV)	....	......	3(4)	Ft. Har., Sys. Pom. (H.V, VI)	....	......	4(2)
Lang. & Comp. (Eng. I)	5	......	......	Veg. Gard. (Hort. IV)	....	......	3(2)
Anat. & Phys. Anim. (V.S. III)	....	(10)	......	Animal Nutr. (A. H. VII)	....	......	4(4)
Botany (Bot. II)	....	......	2(4)	Entom. (Ent. I, IV)	2	......	2(4)
Blacksmith. (M. E. VI)	....	(6)	......	Vet. Sci. (V. S. IV)	....	(12)	....
Agr. Lect.	1	1	1	Veg. Path. (Bot. VIII)	....	2(4)	....
				Agr. Lect.	1	1	1
				Woodwork (M. E. III)	(6)	......	....
				English (Eng. V)	1	......	....

HORTICULTURAL COURSE.

The horticultural course is designed to give practical and scientific instruction in the great productive occupation of horticulture. Practical work in orchard, garden, field and greenhouse is made a prominent feature of the course, especially in its early part which is designed to train young men in all the practical details of general fruit and truck growing. In this work the orchards, nursery, and vineyard of the College and Experiment Station, which contain a wide list of varieties of all hardy commercial fruits, are used for practice and demonstration.

In the Freshman year the work is not materially different from that of the Agricultural and General Science courses, but in the Sophomore year the subjects of the course become more specialized, this emphasis upon horticultural work continuing through the Junior and Senior years, culminating in a thesis upon some horticultural topic.

The advanced work in horticulture is built on the practical work before outlined, but tends to the scientific side, and the training of men for scholastic and experimental work in colleges, experiment stations, or in the Department of Agriculture. Excursions are made by the students to floral establishments in Baltimore and Washington to note and study the commercial aspects of floriculture. Models in landscape architecture and treatment are furnished by the parks and government grounds in and about the national capitol. The State Horticultural Society, by its meetings and exhibitions, affords the horticultural students of the College excellent training in the work of identifying, noting and judging fruit and vegetables.

FRESHMAN	TERMS I	II	III	SOPHOMORE	TERMS I	II	III
Elem. Math. (Math. I)	3	......	......	Plane Geom. (Math. III)	5	......	....
Algebra (Math. II)	5	5	5	Solid Geom. (Math. IV)	....	5	....
Plane Geom. (Math. III)	....	......	5	Trigonometry (Math. V)	....	......	5
Lang. and Comp. (Eng. I)	5	5	5	Rhet. & Comp. (Eng. III)	4	4	....
Am. Liter. (Eng. II)	....	......	3	General Chem. (Chem. I)	4(3)	4(4)	4(3)
Anc. Hist. (Hist. I)*	4	4	......	Plant Culture (Hort. I)	4(2)	......	....
Eng. Hist. (Hist. II)	....	......	3	Plant Phys. (Bot. III)	....	2(4)	....
Eloc. (Pub. Sp. I, II,)	1	2	......	Farm Crops (Agron. I)	....	......	3(4)
Mech. Drawing (M. E. I)	(6)	......	......	Entomol. (Ent. I)	....	......	2(4)
Freehand Draw. (M. E. I*a*)	....	......	(6)	Microscopy (V. S. I)	....	(4)	....
Botan. Prin. (Bot. I)	....	2(4)	......	Physics (P. I)	2	2	....
Systematic (Bot. II)	....	......	2(4)	German (Ger. I)	....	......	5(1)
Geol. (Geol. I)	4	5	......	Agr. Lect.	1	1	1
Phys. Cult.	3	3	......				
Agr. Lect.	1	1	1				

*Latin may be substituted for History in Freshman and Sophomore years.

JUNIOR YEAR	TERMS I	II	III	SENIOR YEAR	TERMS I	II	III
Eng. Lit. (Eng. IV)	5	......	......	Eng. Classics (Eng. IX)	4	4	4
Eng. Comp. (Eng. V)	1	1	1	Eng. Comp. (Eng. XI)	1	1	1
Agr. Chem. (Chem. II)	4(6)	......	......	Fruit Harvesting (Hort. V)	3	......	....
Fruit Grow. (Hort. II)	2(2)	2(2)	......	Syst. Pomol. (Hort. VI)	3(2)	......	....
Floricult. (Hort. III)	....	4(2)	......	Pl. Breeding (Hort. VII)	....	3	....
Veg. Gard. (Hort. IV)	....	......	3(2)	Sm. Fruit (Hort. VIII)	....	......	2(4)
Drawing (C. E. II)	2(3)	2(3)	2(3)	Landsc. Gard. (Hort. IX)	....	......	2
Soils (Agron. II)	....	4(4)	......	Mycology (Bot. VII)	2(2)	......	....
Drainage (Agron. III)	....	......	4(4)	Veg. Path. (Bot. VIII)	....	2(4)	....
Syst. Ent. (Ent. III)	....	......	2(4)	Civics (Civ. II)	....	3	3
Pol. Sci. (Civics I)	5	......	......	Bus. Law (Civ. III)	3	3	....
Histol. Plants (Bot. IV)	....	(8)	......	Pol. Econ. (Civ. IV)	....	4	4
Econ. Plants (Bot. VI)	....	......	2(4)	Farm Crops (Agron. IV)	....	......	....
German (Ger. I, II)	3	3	3	Forestry (For. I)	....	3	....
Agr. Lect.	1	1	1	Research (Hort. X)	(4)	(4)	(4)
				Agr. Lect.	1	1	1

GENERAL SCIENCE COURSE.

The General Science Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science. The basis of this course is a thorough training in mathematics, English and the principles of citizenship and government.

The scientific work of this includes Agriculture, Horticulture, Botany, Physics, Chemistry, Entomology, Zoology, and Veterinary Science. In his first two years the student receives a general introduction to the several sciences, one of which in his Junior and

Senior year becomes his choice for more detailed work. A thesis upon some topic in the selected field completes his course and entitles him to the degree of Bachelor of Science.

GENERAL SCIENCE COURSE.

FRESHMAN	TERMS			SOPHOMORE	TERMS		
	I	II	III		I	II	III
Mathem. (Math. I)	3	......	......	Pl. Geom. (Math. III)	5	......	....
Algebra (Math. II)	5	5	5	Sol. Geom. (Math. IV)	....	5	....
Pl. Geom. (Math. III)	....	......	5	Trigonom. (Math. V)	....	......	5
Lang. Comp. (Eng. I)	5	5	5	Rhet & Comp. (Eng. III)	4	4	....
Am. Lit. (Eng. II)	....	......	3	Eng. Lit. (Eng. IV)	....	......	3
Anc. Hist. (Hist. I)*	4	4	......	Gen. Chem. (Chem. I)	4(3)	4(4)	4(3)
Eng. Hist. (Hist. II)	....	......	3	Physics (P. I)	2	2	....
Mech. Draw. (M. E. I)	(6)	......	......	Plant Cult. (Hort. I)	4(2)	......	....
Freehand Draw. (M. E. I*a*)	....	......	(6)	Microscopy (V. S. I)	....	(4)	....
Geology (Geo. I)	4	5	......	Ani. Histol. (V. S. II)	....	(8)	....
Bot. Princls. (Bot. I)	....	2(4)	......	Entomol. (E. I)	....	......	2(4)
Syst. Bot. (Bot. II)	....	......	2(4)	German (G. I)	....	......	5(1)
Phys. Cult.	(3)	(3)	......	Farm Crops (Agr. I)	....	......	3(4)
Elocution (P. Sp. I)	1	2	......	Elocution (P. Sp. III, IV)	1	2	....
Agr. Lect.	1	1	1	Agr. Lect	1	1	1

*Latin may be substituted.

JUNIOR	TERMS			SENIOR	TERMS		
	I	II	III		I	II	III
Eng. Lit. (Eng. IV)	5	......	......	Eng. Classics (Eng. IX)	4	4	4
Logic (Eng. VIII)	....	......	4	Psychology (Eng. X)	4	......	....
Agl. Chem. (Chem. II)	4	......	......	Compos. (Eng. XI)	1	1	1
Chem. Anal. (Chem. III, V)	(4)	4(4)	4(4)	Adv. Ent. (Ent. V)†	10	10	10
Physics (Phys. II)	4(4)	4(4)	4(4)	or	2(2)	2(2)	2(2)
Syst. Ent. (Ent. III)	5*	......	3*	Adv. Bot. (Bot. VII, VIII, IX)†	2(2)	2(2)	2(2)
Econ. Ent. (Ent. IV)	....	......	2(4)	or	10	10	10
Zool. (Ent. II)	3(6)	......	......	Bus. Law (Civ. III)	3	......	....
German (Ger. II)	3	3	3	Pol. Econ. (Civ. IV)	....	4	4
Civics (Civ. II)	....	3	3	German (Ger. II)	4	4	4
Composition (Eng. V)	1	1	1	French (Fr. I)	....	5	5
Agr. Lect.	1	1	1	Agr. Lect.	1	1	1
Anat, & Phys. Ani. (V. S. III)	....	(10)	......				
Morpho. & Class. (Bot. V)	....	......	2(6)				

*Elective alternative with Literature or Civics.
†Students taking (10) hours in Entomology take 2(2) in Botany and *vice versa.*

MECHANICAL ENGINEERING COURSE.

The course in Mechanical Engineering is prepared for those desiring to do practical work in the mechanical industries, designing and building machinery or supervising similar work. To this end both practical and theoretical instruction is given the student, who is thus equipped for the problems he may be called upon to solve in his regular work after graduation.

The work of the several years differs from the preceding courses (Agricultural, Horticultural and General Science), mainly in the omission of those subjects of a biological character and inclusion of mathematics and shop work. The shop work supplements the mathematical, especially in the last two years when problems in machine design are worked out, so far as time allows in the actual construction of the parts designed. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements used in wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. It is believed that students completing this course will have no difficulty in securing employment after graduation in the field of mechanics or mechanical engineering.

The arrangement of the studies for each of the four years follows.

MECHANICAL ENGINEERING COURSE.

FRESHMAN	TERMS			SOPHOMORE	TERMS		
	I	II	III		I	II	III
Elem. Math. (Math. I)	3	......	......	Plane Geom. (Math. III)	5	......	....
Algebra (Math. II)	5	5	5	Solid Geom. (Math. IV)	....	5	....
Pl. Geom. (Math. III)	....	......	5	Trigon. (Math. V)	....	......	5
Mech. Draw. (M. E. I)	(6)	(6)	(6)	Rhetoric (Eng. III)	4	4	....
Tech. Instr. (M. E. II)	5	......	......	Eng. Lit. (Eng. IV)	....	......	3
Woodwork (M. E. III)	(6)	(6)	(6)	Physics (Phys. I)	2	2	4
Elocution (P. Sp. I, II,)	1	2	......	Gen. Chem. (Chem. I)	4(3)	4(4)	4(3)
Lang. & Comp. (Eng. I)	5	5	5	Mech. Draw. (M. E. IV)	(6)	(4)	(4)
Amer. Lit. (Eng. II),	....	......	3	Appl. Mech. (M. E. V)	4	......	....
Anc. Hist. (Hist. I)*	4	4	......	Forge & Foundry (M. E. VI).	(6)	(6)	(6)
Eng. Hist. (Hist. II)	....	......	3	Descr. Geom. (M. E. VII)	....	3	3
Phys. Cult.	(3)	(3)	......	Elocution (P. Sp. III, IV)	1	2	....
				German (G. I)	....	......	5(1)

*Latin may be substituted.

JUNIOR	TERMS			SENIOR	TERMS		
	I	II	III		I	II	III
Physics (Phys. II)	4(4)	4(4)	4(4)	Power Plants (M. E. XI)	....	2	....
Anal. Geo. (Math. VI)	5	......	......	Mach. Design (M. E. XII)	2(4)	2(4)	2(4)
Dif. Calc. (Math. VII)	....	5	......	Mach. Shop (M. E. XIII)	(8)	(10)	(10)
Integ. Calc. (Math. VIII)	....	......	5	Testing (M. E. XIV)	....	......	(6)
Mach. Design (M. E. VIII)	2(4)	2(4)	2(4)	Graph. Stat. (C. E. III)	(4)	......	....
Mach. Shop (M. E. IX)	(6)	(6)	(6)	Streng. Mat. (C. E. V)	4	......	....
St. Engine (M. E. X)	4	......	......	German (G. III)	4	4	4
German (G. II)	3	3	3	Pol. Econ. (Civ. IV)	....	4	4
Civics (Civ. II)	....	3	3	Composition (Eng. XII)	1	1	1
Composition (Eng. V)	1	1	1				

CIVIL ENGINEERING COURSE.

The Civil Engineering course offers a young man an opportunity to obtain a preliminary training in civil engineering that will enable him to engage in practical engineering work in the field or in the drafting room with the assurance that he has the necessary preparation to profit by the experience thus afforded; or if he desires to pursue a more extended course at a technical school of higher grade, he will be entitled to advanced standing. The curriculum, which is outlined below, includes studies of cultural value, the fundamental sciences which form the basis of engineering, and work of a technical character. Students who have found themselves deficient in ability to learn mathematics are not advised to enter an engineering course. Upon the satisfactory completion of this course the degree of Bachelor of Science, in Civil Engineering, is conferred.

CIVIL ENGINEERING COURSE.

FRESHMAN	TERMS			SOPHOMORE	TERMS		
	I	II	III		I	II	III
Elem. Math. (Math. I)	3	......	......	Plane Geom. (Math. III)	5	......	....
Algebra (Math. II)	....	5	5	Solid Geom. (Math. IV)	....	5	....
Pl. Geo. (Math. III)	....	......	5	Trigonom. (Math. V)	....	......	5
Lang. & Comp. (Eng. I)	5	5	5	Rhetoric (Eng. III)	4	4	....
Amer. Lit. (Eng. II)	....	......	3	Eng. Lit. (Eng. IV)	....	......	3
Anc., Eng. Hist. (Hist. I, II)*	4	4	3	Gen. Chem. (Chem. I)	4(3)	4(4)	4(3)
Mech. Draw. (M. E. I)	(6)	(6)	(6)	Physics (Phys. I)	2	2	....
Woodwork (M. E. III)	....	......	(6)	Mech. Draw. (M. E. IV)	(6)	(4)	(4)
Geol. (G. I)	4	5	......	Descr. Geom. (M. E. VII)	....	3	3
Phys. Cult.	(3)	(3)	......	Appl. Mech. (M. E. V)	4	......	....
Eloc. (P. Sp. I)	1	2	......	German (G. I)	....	......	5(1)
				Eloc. (P. Sp. III, IV)	1	2	....

*Latin may be substituted.

JUNIOR	TERMS			SENIOR	TERMS		
	I	II	III		I	II	III
Anal. Geo. (Math. VI)	5	......	......	Graph. Stat. (C. E. III)	4	......	....
Diff. Calc. (Math. VII)	....	5	......	Struct. Design. (C. E. IV)	2(4)	2(4)	2(4)
Int. Calc. (Math. VIII)	....	......	5	Str. Materials (C. E. V)	4	......	....
Surveying (C. E. I)	2(3)	2(3)	2(3)	Railway Engin. (C. E. VII)	2(8)	......	....
Topog. Draw. (C. E. II)	(6)	(4)	(4)	Hydraulics (C. E. VI)	....	2	2
Physics (Phys. II)	4(4)	4(4)	4(4)	Civ. Engin. (C. E. IX)	....	(8)	(12)
German (G. II)	3	3	3	Highway Engin. (C. E. VIII)	....	......	3
Civics (Civ. II)	....	3	3	Eng. Comp. (Eng. XII)	1	1	1
Eng. Comp. (Eng. I)	1	1	1	Pol. Econ. (Civ. IV)	....	4	4
				German (Ger. III)	4	4	....

CHEMICAL COURSE.

The Course in Chemistry is essentially the same as the General Science Course until the beginning of the Junior year, though any of the four-year courses would prepare for this, as the amount of chemistry is the same in all courses to the end of the Sophomore year, and the demands on the agricultural or technical chemist are now so varied that a foundation with more of the essentials of the agricultural or the mechanical courses is often desirable.

Beginning with the Junior year the major part of the student's time is devoted to chemistry, the practical work in the laboratory occupying approximately half of his time. The course is essentially a course in agricultural chemistry fitting the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture.

The details of the studies are shown in the following table.

CHEMICAL COURSE.

FRESHMAN	TERMS			SOPHOMORE	TERMS		
	I	II	III		I	II	III
Elem. Math. (Math. I)	3	......	......	Plane Geom. (Math. III)	5	......	....
Algebra (Math. II)	5	5	5	Solid Geom. (Math. IV)	....	5	....
Pl. Geom. (Math. III)	....	......	5	Trigonometry (Math. V)	....	......	5
Lang. & Comp. (Eng. I)	5	5	5	Rhet. & Comp. (Eng. II)	4	4	....
Anc. Hist. (Hist. I)*	4	4	......	Eng. Lit. (Eng. IV)	....	......	3
Eng. Hist. (Hist. II)	....	......	4	Gen. Chem. (Chem. I)	4(3)	4(4)	4(3)
Mech. Draw. (M. E. I)	6	......	......	Physics (Phys. I)	2	2	....
Geol. (G. I)	4	5	......	Plant. Cult. (Hort. I)	4(2)	......	....
Phys. Cult.	(3)	(3)	......	French (Fr. I)	4	4	4
Princ'ls Boty. (Bot. I)	....	2(4)	......	German (Gr. I)	....	......	5(1)
Syst. & Ecol. (Bot. II)	....	......	2(4)	Eloc. (P. Sp. III, IV)	1	2	....
Eloc. (Pub. Sp. I)	1	2	......	Agr. Lect.	1	......	....
Agr. Lect.	1	1	1				

*Latin may be substituted.

JUNIOR	TERMS			SENIOR	TERMS		
	I	II	III		I	II	III
Physics (Phys. II)	4(4)	......	......	Organ. Chem. (Chem. VII)	3(12	......	....
Agl. Chem. (Chem. II)	4	......	......	Theor. Chem. (Chem. IX)	2	......	....
Qual. Anal. (Chem. III)	2(12	......	......	Agl. Anal. (Chem. X)	(8)	(16)	....
Inorg. Prep. (Chem. IV)	(4)	......	......	Indust. Ch. (Chem. XI)	....	6(4)	5
Quant. An. (Chem. V)	....	1(12)	......	Research (Chem. XII)	....	......	1(20
Mineralogy (Chem. VI)	....	1(4)	......	German (G. II, III)	4	4	4
Org. Chem. (Chem. VII)	....	2	3	Bus. Law (Civ. III)	3	......	....
Vol. Anal. (Chem. VIII)	....	......	2(16)	Pol. Econ. (Civ. IV)	....	4	4
German (G. II)	3	3	3	Eng. Comp. (Eng. XII)	1	1	1
Civics (Civ. II)	1	1	1				
Agr. Lect.	....	3	3				
Eng. Comp. (Eng.)	1	1	1				

SYNOPSIS OF COURSES.

FRESHMAN YEAR.

FIRST TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. I, II	8	8	8	8	8	8
English I	5	5	5	5	5	5
History I, (or Latin I)	4	4	4	4	4	4
Eloc. I	1	1	1	1	1	1
Drawing	(6)	(6)	(6)	(6)	(6)	(6)
Phys. Cult	(3)	(3)	(3)	(3)	(3)	(3)
Geology I	4	4	4	4		4
Mech. Eng. II, III					5(6)	
Agricultural Lect	1	1	1			1

SECOND TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. II	8	8	8	8	8	8
English I	5	5	5	5	5	5
History I (or Latin I)	4	4	4	4	4	4
Eloc. II	2	2	2	2	2	2
Phys. Cult	(3)	(3)	(3)	(3)	(3)	(3)
Geology I	5	5	5	5		5
Drawing				(6)	(6)	
Mech. Eng. III					(6)	
Agricultural Lect	1	1	1			1
Botany I	2(4)	2(4)	2(4)			2(4)

THIRD TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. II III	8	8	8	8	8	8
English I, II	8	8	8	8	8	8
History II (or Latin I)	3	3	3	3	3	3
Drawing		(6)		(6)	(6)	(6)
Mech. Eng. II	6	6		6	6	
Botany II	2(4)	2(4)	2(4)			2(4)
Agricultural Lect. I	1	1	1			1

SYNOPSIS OF COURSES.

SOPHOMORE YEAR.

FIRST TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. III	5	5	5	5	5	5
English III	4	4	4	4	4	4
Physics I	2	2	2	2	2	2
Chemistry I	4(3)	4(3)	4(3)	4(3)	4(3)	4(3)
Eloc. III	1	1	1	1	1	1
Mech. Eng. V, VI	(6)	(6)		4	4(6)	
Drawing				(6)	(6)	
Hort. I	4(2)	4(2)	4(2)			4(2)
Agricultural Lecture	1	1	1			1
French			4			

SECOND TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. IV	5	5	5	5	5	5
English III	4	4	4	4	4	4
Physics I	2	2	2	2	2	2
Chemistry I	4(4)	4(4)	4(4)	4(4)	4(4)	4(4)
Eloc. IV	2	2	2	2	2	2
Vet. Sci. I, II	(12)	(4)	(4)			4(12)
Drawing				(4)	(4)	
Mech. Eng. VI, VII				3	3(6)	
Agricultural Lecture	1	1				1
Botany III	2(4)	2(4)				
French			4			

THIRD TERM.

	Agr.	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. V	5	5	5	5	5	5
English IV	3	3	3	3	3	3
Chemistry I	4(3)	4(3)	4(3)	4(3)	4(3)	4(3)
German I, II	5(1)	5(1)	5(1)	5(1)	5(1)	5(1)
Drawing				(4)	(4)	
Mech. Engineering VI, VII				3	3(6)	
Entomology I	2(4)	2(4)				2(4)
Egronomy I	3(4)	3(4)				3(4)
Agricultural Lecture	1	1				1
French			4			

SYNOPSIS OF COURSES.

JUNIOR YEAR.

FIRST TERM.

	Agr. I*	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
Mathematics VI					5	5	
English V, VI	1	1	6	1	1	1	6
Physics II				4(4)	4(4)	4(4)	4(4)
Chemistry II, III, IV	4(6)	4(6)	4(6)	6(16)			4(4)
Drawing						2(4)	
Horticulture II	2(2)	2(2)	2(2)				
Mechanical Eng. VIII, IX, X						6(10)	
Civil Engin. I, II	2(3)		2(3)		2(9)		
Civics I			5				
Entomology II, III		3(6)					8(6)
Ani. Husbandry I, II		6(6)					
German II	3	3	3	3	3	3	3
Agricultural Lecture	1	1	1	1			1

SECOND TERM.

	Agr. I	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. VII					5(5)	5(5)	
English V	1	1	1	1	1	1	1
Physics II				4(4)	4(4)	4(4)	4(4)
Chemistry V, VI, VII	3(4)	3(4)		4(16)			4(4)
Drawing						2(4)	
Horticulture II, III	2(2)	2(2)	6(4)				
Mech. Engin. IX						(6)	
Civil Engin. II, I	2(3)		2(3)		2(7)		
Civics II	3	3		3	3	3	3
Vet. Science III		(10)					(10)
German III	3	3	3	3	3	3	3
Botany IV			(8)				
Agronomy II	4(4)	4(4)	4(4)				
Ani. Husbandry III	2	2					
Agricultural Lecture	1	1	1		1		1

THIRD TERM.

	Agr.I	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
Math. VIII					5(5)	5(5)	
English V, VIII	1	1	1	1	1	1	5
Physics II				4(4)	4(4)	4(4)	4(4)
Chemistry III, VII, VIII	3			5(16)			4(4)
Drawing I						2(4)	
Horticulture IV			3(2)				
Mech. Engin. IX						(6)	
Civics II	3	3		3	3	3	3
Civil Engin. I, II	2(3)		2(3)		2(7)		
Entomology III, IV	2(4)	2(4)	2)4)				5(4)
Botany V, VI	2(4)	2(4)	2(4)				2(6)
German III	3	3	3	3	3	3	3
Agronomy II, III	8(8)	4	4(4)				
Ani. Hus. III, IV		5(6)					
Agricultural Lecture	1	1	1				1

*Agr. I is Agronomy; Agr. II is Animal Husbandry.

SYNOPSIS OF COURSES.

SENIOR YEAR.

FIRST TERM.

	Agr.I	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
English IX, X, XI................	9	5	10	1	1	1	9
Chemistry IX, X, XI, XII.........	3(4)	3		5(20)			
Horticulture V, VI, X............			8(2)				
Mech. Engin. XII, XIII...........						2(12)	
Civil Eng. III, IV, V, VII........					12(12)	8	
Entomology V....................							10 or 2(2)
Botany VII, IX..................			2(2)				2(2) or 10
Civics III......................	3	3	3	3			3
German III......................	4	4		4	4	4	4
Agronomy IV....................	(4)						
Ani. Hus. V, VI..................		2(6)					
Agricultural Lecture.............	1	1					1

SECOND TERM.

	Agr.I	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
English IX, XI..................	5	1	5	1	1	1	5
Chemistry IX, X, XI.............				6(20)			
Horticulture VII, X..............	3	3	5				
Mech. Eng. XI, XII, XIII........						4(14)	
Civil Eng. IV, VI, IX............					4(12)		
Entomology V....................	2(4)	2(4)					10 or 2(2)
Botany VIII, IX..................	2(4)		2(4)				2(2) or 10
Civics III, IV....................	4	4	7	4	4	4	4
German VI......................				4	4	4	4
French							5
Forestry I......................	3	3	3				
Vet. Sci. IV.....................		4(8)					
Agronomy V.....................	3(4)		3				
Ani. Hus. VII....................		4					
Research........................	2(4)	2(4)					
Thesis..........................	2	2					
Agricultural Lecture.............	1	1					1

THIRD TERM.

	Agr.I	Agr.II	Hort.	Chem.	C. E.	M. E.	G. Sc.
English IX, XI..................	5	5	5	1	1	1	5
Horticulture VIII, IX, X.........	4	6	8				
Chemistry XI, XII...............				5(20)			
Mech. Engin. XII, XIII, XIV....						2(20)	
Civil Eng. IV, VI, VIII, IX......					7(16)		
Entomology V....................							10 or 2(2)
Botany IX.......................							2(2) or 10
Civics III, IV....................	4	4	7	4			4
German VI......................				4			4
French..........................							5
Agronomy VI, VII, VIII, IX.....	8(16)	2					
Ani. Hus. VII....................		4(4)					
Agricultural Lecture.............	1	1					
Research........................	2(4)	2(4)					
Thesis..........................	2	2					1

SPECIAL WINTER COURSE IN AGRICULTURE.

COMMENCING JANUARY 8, 1907.

A ten-weeks course designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland, who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-years course; this solves the problem for them.

OUTLINE OF THE COURSE.

Every student will be required to take not less than two hundred and fifty hours of work. Two hundred of these must be devoted to the following specified studies:

Soils, 22 hours.
Farm Dairying, 40 hours.
Manures, 20 hours.
Plant Production, 25 hours.
Agricultural Chemistry, 20 hours.
Farm Live Stock, 18 hours.
Stock Feeding, 15 hours.
Horticulture, 40 hours.

The other fifty hours will be devoted to such topics as the student may elect from the following: Veterinary Science, 40 hours; Tobacco, 5 hours; Plant Physiology and Pathology, 15 hours; Economic Entomology, 20 hours; Carpentering and Blacksmithing, 45 hours; Farm accounts, 12 hours; Road Construction and Leveling, 5 hours; Civil Government, 10 hours.

Tuition and room free. No expense for use of laboratories or supplies. Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within a short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College for $4.00 per week. Students will be expected to furnish their own bed clothes, pillows, towels, napkins and overalls for dairy work. Short course students are not required to drill or wear uniforms.

GENERAL INFORMATION.

REQUIREMENTS FOR ADMISSION.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 18th and 19th, 1906. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic complete, algebra, as far as quadratics, political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic, as far as percentage, United States history and political geography.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present certificate from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and wood work.

Every applicant for admission to the College must bring satisfactory testimonials as to his character and scholarship from his former teacher. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

EXAMINATIONS AND PROMOTIONS.

In order to pass from one class to the next higher a student is required to pass an examination in each study pursued by a mark of at least sixty per cent. and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical or Civil Engineering Courses will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

REPORTS.

Detailed reports are sent to parents and guardians at the end of every quarter. These give the grade of the student in every branch of study, his attendance record, and his conduct record with comment by the President upon each item.

In addition to this, monthly reports are issued for October, November, January, February and April. These give general information as to scholarship, conduct, attendance and health, and call attention to deficiency in any one of these particulars.

GRADUATION AND DEGREES.

BACHELOR OF SCIENCE.

As a requisite for graduation, the candidate for this degree must, in addition to having satisfactorily completed the work previously outlined, submit a thesis, which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

MASTER OF SCIENCE.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon College graduates of not less than two years' standing, who are employed in any of the departments of the College and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

MASTER OF ARTS.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, the Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

SCHOLARSHIPS AND FELLOWSHIPS.

COMPETITIVE SCHOLARSHIPS.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County School Superintendent. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present themselves at the College, or other designated place, at the date which may be named in the September or January next following the award, and be examined by College authorities for entrance to the Freshman Class. Alternates are to be thus examined, as well as principals and in case of a failure of the principal to secure or hold the scholarship, the alternate will have the first right to the place, if within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to secure the same, pass the entrance examination of the College, and (if entering in January) such other examination as may be required to join *the Freshman Class. To hold a scholarship, the student must make all payments promptly and meet such requirements of the College as to scholarship and deportment as may be prescribed by the President and Faculty. By passing special examina-*

tions, or by presenting satisfactory certificates, candidates for scholarship may be permitted to enter the Sophomore Class." A student who fails of promotion, thereby forfeits his scholarship and the School Board which granted such scholarship will be notified accordingly.

INDUSTRIAL SCHOLARSHIPS.

There are also offered by the College a limited number of "Industrial Scholarships." The holder of such a scholarship is required to work as a waiter or janitor a definite number of hours per day; these hours are so arranged as to conflict as little as possible with his time for study or recitation. Industrial scholarship students are not required to drill.

In consideration of their work a rebate of $150 a year is granted each of these students.

A selection is made from applicants for this scholarship on the basis of mental preparation, physical ability and moral character. Preference will be given to the sons of citizens of Maryland. Applications for this scholarship specifying age, weight, mental advancement and enclosing testimonial of moral character must be made in writing to the President of the College prior to September 1st, and the successful applicants for this scholarship will be notified to report in person at the College on September the 17th.

STUDENT OPPORTUNITIES.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference.

FACILITIES FOR RELIGIOUS WORSHIP.

The College is undenominational in character. The daily exercises of the College are opened with worship in the College Chapel.

Every Sunday afternoon services are conducted by a minister of some Christian denomination, an effort being made to have all the more prominent churches represented in the pulpit. There is an Episcopal Church at College Park, and at Berwyn one mile north and at Riverdale one mile south are Presbyterian churches. In Hyattsville, two miles south, may be found Catholic, Episcopal, Presbyterian, Baptist and Methodist churches. Students are encouraged to attend the church with which they desire to worship.

COLLEGE REGULATIONS.

The attention of parents is earnestly called to the following rules in force at this College: The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures in a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to parents during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian and received by the President of the College:

"It is understood that the President of the College as the executive of the same, and acting for the Board of Trustees, a party to this contract, *has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations herein set forth."*

A cadet manifesting an indifference to the observance of the rules and regulations of the institution or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so his parents upon notice given by the President must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examinations is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone calls, unless they are urgent.

Students will not be permitted to make contracts or to sell any article to their associates without the approval of the President.

The sale of second hand furniture or clothing to new cadets is prohibited unless the sale be approved by the commandant of cadets.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE, ENDORSED BY THE FACULTY.

I. A student may not change his course of study unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.

2. Examinations to make up conditions will be given only at times set apart by this committee. These dates will be just before the regular quarterly examinations in December, April and June; also the day before the resumption of college work in September. Should, for any reason, a special examination be requested at any other time a charge of $2.00 will be made for each subject on which the applicant is examined.

3. To attain proficiency a student must make an examination grade of 60 per cent. also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent. is required.

4. A student may not be promoted if conditioned in more than one study.

5. A student may not be promoted if he has any conditions of more than a year outstanding.

6. No student may be promoted from the Preparatory Department with any condition.

7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.

8. A student is subject to an oral examination at any time within ten days after written examination.

9. An examination paper, containing erasures or showing alterations, may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.

10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.

11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students in the general science course must submit a schedule of elective work, to be approved by this committee, prior to the resumption of college work in September.

13. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

14. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the college seal nor the Governor's signature.

15. No student may take work in more than one class during any one term.

STUDENT EXPENSES.

No charge is made for tuition, books or diplomas. No reductions are made for regular vacations.

The expenses of the College year for the several classes of students are as follows:

BOARDING STUDENTS.—Board, heat, light and room $200.00.

SCHOLARSHIP STUDENTS.—Board, heat, light and room $100.00.

DAY STUDENTS.—Room, heat and tuition $40.00.

SHORT WINTER COURSE STUDENTS.—Board, heat, light and room $4.00 per week.

Students entering College after November 1st, or leaving the same prior to the close of the scholastic year will be charged for the time they are here as follows, viz:

Boarding students at the rate of $25.00 per month.

Scholarship students at the rate of $13.00 per month.

Day students at the rate of $5.00 per month.

Students withdrawing after entrance, must pay the charge for at least one month's attendance.

Table board for students not rooming at the College will be $14.00 per month, or 25 cents per meal.

TIME OF PAYMENT.

For Boarding Students $50.00 on entrance, $50.00 November 15th, $50.00 February 1st, $50.00 April 1st.

For Scholarship Students, $25.00 on entrance, $25.00 November 15th, $25.00 February 1st, $25.00 April 1st.

For Day Students $10.00 on entrance, $10.00 November 15th, $10.00 February 1st, $10.00 April 1st.

Promptness of payment is essential.

FEES.

No fees of any character will be charged by the College.

Students will be admitted free of cost to membership in the College Athletic Association.

Damage to College property by students will be promptly reported to parents or guardians and prompt payment expected.

UNIFORM.*

Dress Uniform (coat, trousers and cap)	$15.60
Khaki Uniform (coat, trousers, hat and leggins)	5.50
Shirt and belt	1.25

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

Coaching for backward students will be provided by the President upon application.

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*Price quoted on basis of last year's contract.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed).
2 pairs sheets (for single bed)
4 pillow cases.
2 white dimity bedspreads (three quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (shuck), cotton top (uniform).

The room-mates together purchase the following articles:

2 table cloths (uniform).
2 clothes bags (uniform).
1 broom.

All the articles marked (uniform) in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.

The College will not be responsible for articles left in the barracks during vacations, unless by special arrangement.

STUDENT ORGANIZATIONS.

Student's clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and college pride and developing an *esprit de corps* among the students. Each class has its own organization in which matters relating to the class are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline and tends to raise the standard of student honor.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

President, E. I. Oswald.
Vice-President, C. H. Harper.
Secretary, R. H. Dixon.
Treasurer, J. P. Mudd.

Much encouraging work has been done by this organization during the past year, and much interest has been shown in the meetings.

LITERARY SOCIETIES.

These societies are invaluable adjuncts to college work. Through them a good knowledge of parliamentary law is gained as well as a readiness of expression and activity in thought qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

NEW MERCER SOCIETY.

President, L. Bassett.
Vice-President, R. H. Dixon.
Secretary-Treasurer, A. N. Bowland.
Sergeant-at-Arms, G. G. Becker.

MORRILL SOCIETY.

President, L. F. Zerkel.
Vice-President, G. M. Mayer.
Secretary-Treasurer, J. J. T. Graham.
Sergeant-at-Arms, A. M. McNutt.

ROSSBURG CLUB.

President, R. H. Dixon.
Vice-President, G. M. Mayer.
Secretary, L. F. Zerkel.
Treasurer, L. Bassett.

The social man is a necessity—hence this organization is encouraged and supported by the President and Faculty. Its entertainments have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

"REVEILLE."

The "Reveille" is the College annual, edited entirely by the Senior class; it is the successor to the "Cadet Review." Nine editions of the "Reveille" have appeared and each has been characterized by a gratifying improvement in the standard both of originality and expression.

EDITORIAL STAFF, 1906.

Editor-in-Chief, L. F. Zerkel.
Associate Editors, H. J. Caul, R. H. Dixon.
Business Manager, F. R. B. Waters.
Associate Business Managers, A. M. McNutt, C. S. Ridgway, J. L. Showell.

DEPARTMENT EDITORS.

Athletic, J. J. T. Graham.
Humorist, G. M. Mayer.
Rossburg Club, R. H. Dixon.
Class History, S. P Thomas.

THE ORATORICAL ASSOCIATION OF MARYLAND COLLEGES.

The Maryland Agricultural College is a member of this Association which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges in rotation and a marked improvement is to be observed as a result of its organization.

INTER-COLLEGIATE DEBATE.

In 1904 an arrangement was made for an annual contest in debating between students representing Delaware College and the Maryland Agricultural College.

This contest has aroused much interest and enthusiasm, a marked improvement may be observed on the part of the participants from year to year.

THE ALUMNI ASSOCIATION.

"The Alumni Association is steadily growing in two ways; that is to say, recent graduates almost invariably become active members, and the graduates of the earlier days of the College are becoming more active and more interested in all that pertains to the welfare of our Alma Mater.

The semi-centennial celebration which occured March 6, 1906, had for one of its results the bringing together of a larger gathering of the Alumni than on any previous occasion, and this re-union is probably the fore-runner of larger Alumni gatherings in the future.

The association has continued the offer of three medals for worthy students in the several collegiate departments, and there is no doubt regarding the wisdom of stimulating in this way the energies of the students. The enrollment of the Alumni Association is now reaching a point where some definite accomplishment can be effected, and each individual should be ready to suggest a desirable project, at the same time to assist in the execution of that object which is most feasible and popular with the Association at large.

The entire institution as viewed from the Alumni standpoint is worthy of the confidence of its patrons and the public. Each of us should feel that every step in advance of that achieved in our day, should give us a feeling of pride, that it is in a manner the result of the successful completion of the work then offered and should bind us more closely to the work of the present and the broadening of its future.

The officers for the year are: President, S. S. Buckley, '93; Vice-President, W. S. Keech, '90; Secretary-Treasurer, M. N.

Straughn, '99; Executive Committee, members at large, F. B. Bomberger, '94 and W. W. Skinner, '95.

Graduates and members of the association are requested to keep the Secretary-Treasurer, *M. N. Straughn, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates which will enable the officers to locate and communicate with them will facilitate their efforts and will tend to further the success of the Association."

An Alumnus.

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*Secretary-Treasurer for 1906-7. E. F. Garner, '03.

DEGREES CONFERRED 1906, WITH SUBJECTS OF THESES.

MASTER OF ARTS (HONORARY)

ISAAC LOBE STRAUS,
J. ENOS RAY, JR.,
HENRY T. HARRISON,
CHAS. S. RICHARDSON.

BACHELOR OF SCIENCE IN AGRICULTURE.

ALONZO MOULTON MCNUTT,
"A study of Pollen."

CHARLES SYLVESTER RIDGWAY,
"The Distribution of Plants with respect to Reforestation."

SAMUEL P THOMAS,
"The Situation of Orchards with respect to Frost and Air Currents."

BACHELOR OF SCIENCE IN CHEMISTRY.

JAMES JESSE THOMAS GRAHAM,
"The Determination of Nitrogen."

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

RICHARD HOOPER DIXON, JR.,
"Plan for a Proposed Athletic Field at the Maryland Agricultural College."

JOHN WALLACE MITCHELL,
"The Location of a Spur Track from the City and Suburban Railway to the Maryland Agricultural College."

FREDERICK RANSEL BROOKS WATERS,
"The Location of a Spur Track from the City and Suburban Railway to the Maryland Agricultural College."

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING.

LEONARD EDWARD BASSETT,
"Development, Application and Growth of Gas Engines."
GEORGE MILROY MAYER,
"The Economic Production of Steam."

HAROLD JOHN CAUL,
"Road-bed and Rolling Stock of Railroads."

BACHELOR OF SCIENCE.

JOHN LETCHER SHOWELL,
"Some notes on the Macrosporium of Canteloupe Blight."
BENJAMIN M. CHISWELL, 1904 (in absentia).

BACHELOR OF ARTS.

LEMUEL FERDINAND ZERKEL,
"The Development of Early English Prose."

MEDALS.

JAMES JESSE THOMAS GRAHAM,

Senior Medal: for highest standing for the entire course; offered by the President. Average 92.2.

JOHN WALLACE MITCHELL AND LEMUEL FERDINAND ZERKEL.

Honorable mention, average over 90.

WILLIAM T. MAHONEY,

Junior Medal: for highest standing in Junior Year; offered by the President. Average 98.

H. C. BYRD,

*Gold Medal for best debater in commencement competition; offered by the Alumni Association.

JAMES JESSE THOMAS GRAHAM,

Gold Medal for best Thesis on Agricultural Sciences; offered by the Alumni.

HAROLD JOHN CAUL,

Gold Medal for best work in Mechanical Engineering Department; offered by the Alumni Association.

LEMUEL FERDINAND ZERKEL,

Gold Medal for the best essay on "American Citizenship;" offered by the Board of Trustees.

LEMUEL FERDINAND ZERKEL,

Intercollegiate Oratorical Association Medal, for second best oration in competition with four colleges.

Schley Prize for best oration, treating Maryland History, to be delivered on Maryland Day, 1907; offered by Hon. B. H. Warner.

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*Regulations governing competition for Alumni Medals: Competition for the medal for best thesis on Agricultural Science is open to members of the Senior Class and Second Year of the Two-Year Agricultural Course; and two copies of the thesis must be deposited with the Chairman of the Science Section of the Faculty at least one week before Commencement day.

Rules governing the competition for medals for commencement debate and for best work in the Mechanical Engineering Department are provided by the departments of English and Public speaking, and the Professor of Mechanical Engineering, respectively.

Competition is open to undergraduate students only.

MILITARY ROSTER—CADET BATTALION.

EDWARD LLOYD, MAJOR. U. S. A.

COMMANDANT OF CADETS.

FIELD AND STAFF.

Major, H. D. Williar, Jr.
First Lieutenant and Adjutant, A. D. Cockey.
Second Lieutenant and Quartermaster, S. T. Vocke.

NON-COMMISSIONED STAFF.

Sergeant-Major, C. L. Lippincott.
Quartermaster Sergeant, N. L. Warren.
Color Sergeant, R. Brigham.

COMPANY A.

J. P. Mudd, Captain.
H. H. Owings, First Lieutenant.
A. N. Bowland, Second Lieutenant.
C. H. Harper, Third Lieutenant.
R. B. Cooper, First Sergeant.
C. Sylvester, Second Sergeant.
H. W. Lippincott, Third Sergeant.
H. W. Stinson, Fourth Sergeant.
H. B. Hoshall, Fifth Sergeant.
E. H. Plumacher, Quartermaster Sergeant.
C. F. Mayer, First Corporal.
A. L. Stabler, Second Corporal.
B. M. Paradis, Third Corporal.
A. R. Todd, Fourth Corporal.
R. M. Ager, Fifth Corporal.
J. P. Grason, Sixth Corporal.

COMPANY B.

E. S. Holloway, Captain.
M. H. Adams, First Lieutenant.
G. W. Firor, Second Lieutenant.
U. W. Long, First Sergeant.
J. L. Iglehart, Second Sergeant.
J. P. Shamberger, Third Sergeant.
E. J. Byron, Fourth Sergeant.
J. W. Firor, Fifth Sergeant.
S. M. Lowry, Quartermaster Sergeant.
W. W. Heyser, First Corporal.
J. Jarrell, Second Corporal.
A. C. Turner, Third Corporal.
L. Jarrell, Fourth Corporal.
P. E. Burroughs, Fifth Corporal.

COMPANY C.

F. E. Linnell, Captain.

H. A. Blair, First Lieutenant.
H. S. Hattan, Second Lieutenant.
T. B. Mackall, First Sergeant.
J. D. Darby, Second Sergeant.
R. Silvester, Third Sergeant.
G. W. Wilson, Fourth Sergeant.
H. C. Byrd, Fifth Sergeant.
M. C. Plumacher, Quartermaster Sergeant.
S. L. Neal, First Corporal.
J. F. Allison, Second Corporal.
R. A. Judd, Third Corporal.
N. E. Osborne, Fourth Corporal.
J. Holloway, Fifth Corporal.

ROSTER OF MATRICULATES.

SESSION 1904-1905.

GRADUATE STUDENTS.

	POST OFFICE.	COUNTY.
Gahan, A. B.	College Park	Prince George
Shaw, S. B.	Rehoboth	Somerset

SENIOR CLASS.

Bassett, L.	Cambridge	Dorchester
Caul, H. J.	Buffalo	*New York*
Dixon, R. H.	Cambridge	Dorchester
Graham, J. J. T.	Ingleside	Queen Anne
Mayer, G. M.	Frostburg	Allegany
McNutt, A. M.	Berkley	Harford
Mitchell, J. W.	Brookline	*Massachusetts*
Ridgway, C. S.	Beltsville	Prince George
Showell, J. L.	Berlin	Worcester
Thomas, S. P.	Sandy Spring	Montgomery
Waters, F. R. B.	Seat Pleasant	Prince George
Zerkel, L. F.	Luray	*Virginia*

JUNIOR CLASS.

Adams, M. H.	Princess Anne	Somerset
Blair, E. A.	Baltimore	Baltimore City
Bowland, A. N.	Kingston	Somerset
Capestany, R. L.	San Juan	*Porto Rico*
Cockey, A. D.	Owings Mills	Baltimore
Firor, G. W.	Thurmont	Frederick
Harper, C. H.	Baltimore	Baltimore City
Hatton, H. S.	Piscataway	Prince George
Holloway, E. S.	Rosaryville	Prince George
Hudson, M. A.	Stockton	Worcester
Lewis, M. C.	Crisfield	Somerset
Linnell, F. E.	Falmouth	*Massachusetts*
Lippincott, C. L.	Grafton	*West Virginia.*
Mahoney, W. T.	Leeds	Cecil
Mudd, J. P.	Washington	*District of Columbia*
Owings, H. H.	Simpsonville	Howard
Plumacher, E. H.	Maracaibo	*Venezuela*
Plumacher, M. C.	Maracaibo	*Venezuela*
Vocke, S. T.	Baltimore	Baltimore City
Williar, H. D.	Ruxton	Baltimore
Zouck, J. F.	Glyndon	Baltimore

SOPHOMORE CLASS.

Becker, G. G.	Baltimore	Baltimore City
Brice, N. E.	Annapolis	Anne Arundel
Brigham, R.	Marlborough	*Massachusetts*
Brome, J. P.	Wallville	Calvert
Broughton, L. B.	Pocomoke City	Worcester
Byrd, H. C.	Crisfield	Somerset

Byron, E. J.	Williamsport	Washington
Chew, L. C.	Washington	*District of Columbia*
Cooper, B. R.	Worton	Kent
Darby, J. D.	Buck Lodge	Montgomery
Day, G. C.	Dublin	Harford
Dirickson, J. B.	Berlin	Worcester
Firor, J. W.	Thurmont	Frederick
Griffin, J. P.	Highland	Howard
Haslup, J. E.	Savage	Howard
Lampkin, W. E.	Houston	*Texas*
Hoshall, H. B.	Parkton	Baltimore
Iglehart, J. L.	Simpsonville	Howard
Lippincott, H. W.	Grafton	*West Virginia*
Long, U. W.	Selbyville	*Delaware*
Lowrey, S. L.	Rossville	Baltimore
McCabe, W. W.	Selbyville	*Delaware*
McSorley, F. C.	Stevensville	Queen Anne
Mackall, T. B.	Mackall	Calvert
Myer, C. F.	Frostburg	Allegany
Ort, F. C.	Frostburg	Allegany
Paradis, E. M.	Stockton	Worcester
Reeder, W. C.	Rising Sun	Cecil
Rumig, F. E.	College Park	Pringe George
Sanford, J. W.	Washington	*District of Columbia*
Saunders, O. H.	Lankford	Kent
Shamberger, J. P.	Parkton	Baltimore
Silvester, R. L.	College Park	Prince George
Solari, C. S.	College Park	Prince George
Somerville, W. A. S.	Cumberland	Allegany
Stabler, A. L.	Brighton	Montgomery
Stinson, H. W.	Columbia	Howard
Stott, R. A.	Taneytown	Carroll
Sylvester, C. W.	Denton	Caroline
Thomas, W. H.	Cross Roads	Charles
Warren, N. L.	Selbyville	*Delaware*
Warthen, C. A.	Kensington	Montgomery
Wilson, R. A	Cumberland	Allegany
Zelaya, A.	Nicaragua	*Nicaragua*

FRESHMAN CLASS.

Ager, R. M.	Hyattsville	Prince George
Allen R. S.	Rising Sun	Cecil
Allison, J. W. F.	Washington	*District of Columbia*
Badenhoop, H. W. H.	White Marsh	Baltimore
Besa, A.	Santiago	*Chile*
Besa, C.	Santiago	*Chile*
Bishop, C. C.	Snow Hill	Worcester
Bosley, J.	Baltimore	Baltimore City
Boyle, W.	Brightwood	*District of Columbia*
Burgess, A. E.	Hyattsville	Prince George
Burrows, P. E.	Croome	Prince George
Coster, H. M.	Solomons	Calvert
Crapster, J. O.	Taneytown	Carroll
Deakyne L. S.	Denton	Caroline

Dickey, P. S.	Baltimore	Baltimore City
Dupuy, P. E.	Passamayo	*Peru*
Emmert, F. D.	Hagerstown	Washington
England, W. R.	Washington	*District of Columbia*
Grason, J. P.	Towson	Baltimore
Groves, W. D.	Ellicott City	Howard
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Graduate Students	2
Senior Class	12
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Preparatory Students	33
Total	186

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3.	Prof. Colby	“ “ “ “	..1860—1861
4.	Prof. Henry Onderdonk	“ “ “ “	..1861—1864
5.	Prof. N. B. Worthington	“ “ “ “	..1864—1867
6.	Prof. C. L. C. Minor,	President of College	..1867—1868
7.	Admiral Franklin Buchanan	“ “ “ “	..1868—1869
8.	Prof. Samuel Regester	“ “ “ “	..1869—1873
9.	Gen. Samuel Jones	“ “ “ “	..1873—1875
10.	Capt. W. H. Parker	“ “ “ “	..1875—1883
11.	Gen. Augustus Smith	“ “ “ “	..1883—1887
12.	Allen Dodge, Esq., Pro Tem.	“ “ “ “	..1887—1888
13.	Major Henry E. Alvord	“ “ “ “	..1888—1892
14.	Capt. R. W. Silvester	“ “ “ “	..1892———

LIST OF GRADUATES, WITH DEGREES AND ADDRESSES.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

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Sands, W. B., A. B., Lake Roland, Md.

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Todd, W. B., B. S.

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*Deceased.

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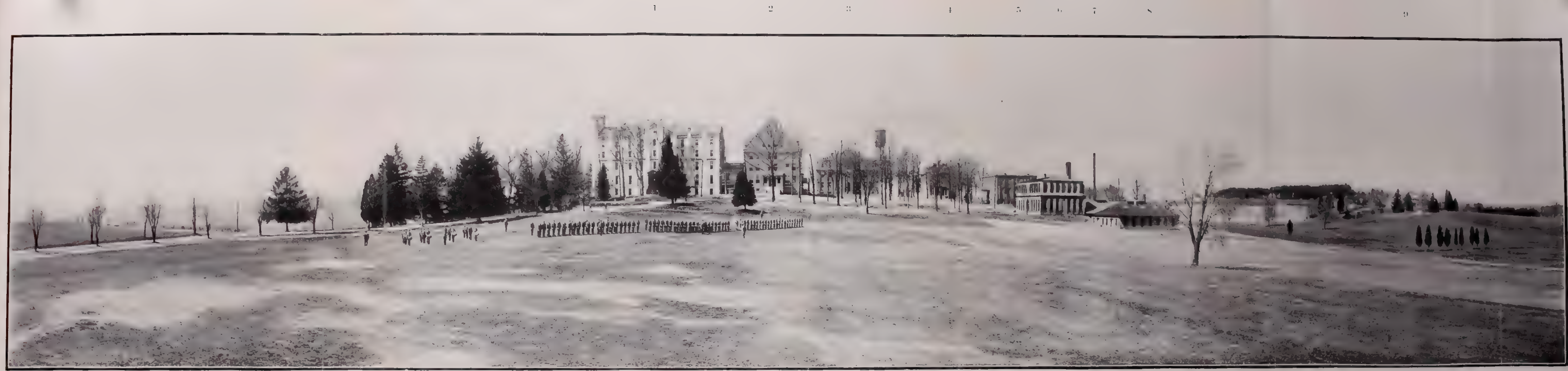

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2—Dormitory and Administration '04
3—Morrill Hall '98.
4—Gymnasium and Library '92.

5—Chemical Department '97.
6—Mechanical Department '96.
7—Heating and Electric Plant '96, '04
8—Forge Room and Foundry '04.
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Assistant in Chemistry.

GEORGE P. WELDON, B. S.,
Assistant in Entomology and Vegetable Pathology.

J. J. T. GRAHAM, B. S.,
Assistant in Chemistry.

E. I. LICHTI, B. S., AND E. P. WALLS, M. S.,
Temporary Assistants in Vegetable Pathology, Botany and Entomology.

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*On leave of absence.

CALENDAR FOR 1907-1908.

FIRST TERM.

September 17th and 18th—Entrance Examinations.

Thursday, September 19th, 1 P. M.—College Work Begins.

Friday, December 20th, noon—First Term Ends.

Friday, December 20th, noon, to Monday, January 6th, noon—Christma Holidays.

SECOND TERM.

Monday, January 6th, noon—Second Term Begins.

Tuesday, January 7th—Special Winter Course in Agriculture Begins.

Saturday, February 1st—Filing Subjects of Theses.

Friday, March 14th—Second Term and Special Winter Course in Agriculture End.

THIRD TERM.

Monday, March 17th—Third Term Begins.

Wednesday, April 15th, noon, to Tuesday, April 21st, 1 P. M.—Easter Holidays.

Thursday, May 15th—Submitting of Theses.

Sunday, June 8th,—Baccalaureate Sermon.

Monday, June 9th—Class Day.

Tuesday, June 10th—Alumni Day.

Wednesday, June 11th, 11 A. M.—Commencement Day Exercises.

THE MARYLAND AGRICULTURAL COLLEGE.

HISTORY.

An act to establish and endow an agricultural college in the State of Maryland was passed by the legislature of the State in 1856 (see Laws of Maryland 1856, Chapter 97). At this time no other such institution of a similar character existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original College building was erected, and its doors opened to students in the fall of 1859.

For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land Grant Act," providing for the establishment and maintenance of agricultural colleges, by applying for that purpose a proportionate amount of unclaimed Western land, in place of scrip, to each State and Territory in the Union. This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part at least, a State institution, and such it is at the present time.

In 1892 the Federal Government passed a second act for the benefit of the agricultural and mechanical colleges. By the act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 be reached, was granted each State, to be applied to the further equipment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, as was the case in all the States of the South, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

In 1887 the Federal Congress passed an important act in aid of the agricultural interests, appropriating $15,000 a year for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

In 1906 Congress passed the Adams Bill, a measure of further assistance for the experiment stations of the several States. By this act there is granted a gradual increase in Federal support to the working funds for the experimental work of the stations (amounting to $15,000 additional in ten years).

During the last twelve years the history of the College has shown a record of steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory, the mechanical engineering building (recently enlarged), Morrill Hall, the college barn, the sanitarium and the new administration building and barracks as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Horticulture, Entomology and Vegetable Pathology, and of Chemistry (Fertilizer Control). Under such favorable auspices the institution must continue to grow, and ultimately reach the status of being the most important factor in the agricultural and industrial development of the State.

The State Bureau of Forestry, recently created, will cooperate with the College, the Director being Lecturer on Forestry at the Agricultural College, by the terms of his appointment.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington and thirty-two miles from Baltimore. At least nine trains a day from each city stop at College Station, thus making the place easily accessible from all parts of the State. The telegraph station, Hyattsville, is connected with the College by a telephone line.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south and Laurel, the largest town in the county, is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway. The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres and is devoted to the gardens, orchards, vineyard and to general farming.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

COLLEGE BUILDINGS.

The College barracks is a five-story brick building containing student quarters and the Domestic Department. The dormitories are large, well ventilated and provided with fire escapes, bath and water rooms. All the buildings are lighted with gas and electricity and heated with steam from central plants on the College grounds.

In 1892 the present building of the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is on the second floor and is large, well-lighted and convenient for the purpose.

The Mechanical Engineering Department is located in a two story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex, designed to afford additional facilities in forging and foundry work, which was erected and equipped during 1904. It is a model building of its kind.

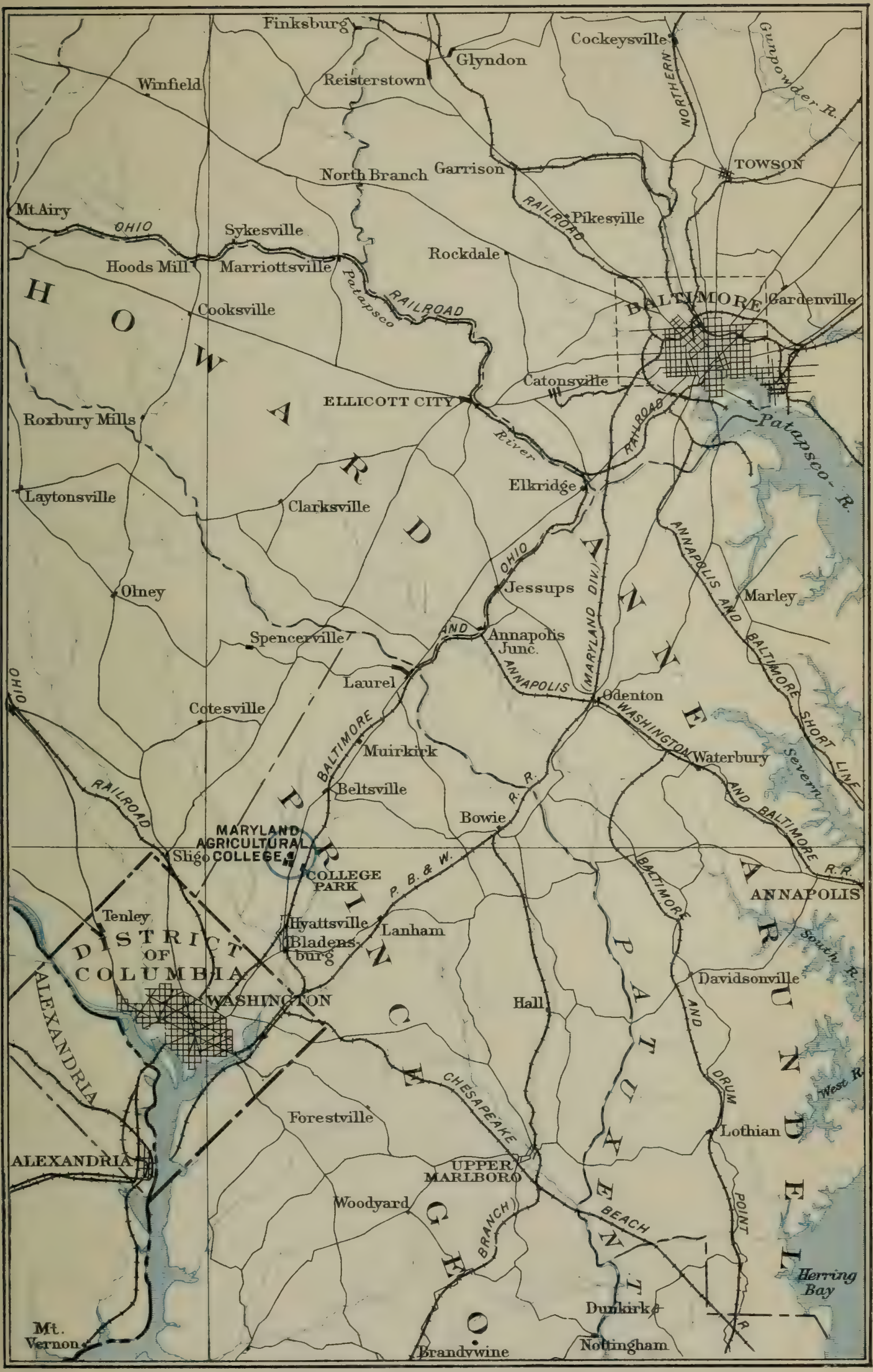
The chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned by an Act of the General Assembly to the Professor of Chemistry at this College, who is thus the State Chemist.

Another addition to the group of College buildings is Morrill Hall, erected in 1898. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments have suffered, and greatly extending their opportunities for the development of high-grade scientific work. A greenhouse for work in entomology and vegetable pathology was erected in 1904.

The College Sanitarium, completed in 1901, has proved a most efficient means of isolating infectious disease which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished with modern hospital facilities. An experienced nurse is in constant attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated and equipments secured.

Among recent improvements are additional dormitories, accommodating twice the number of students; an auditorium and offices in the Administration Building 1904; a complete renovation of the original College barracks; a modern steam heating plant; gas and



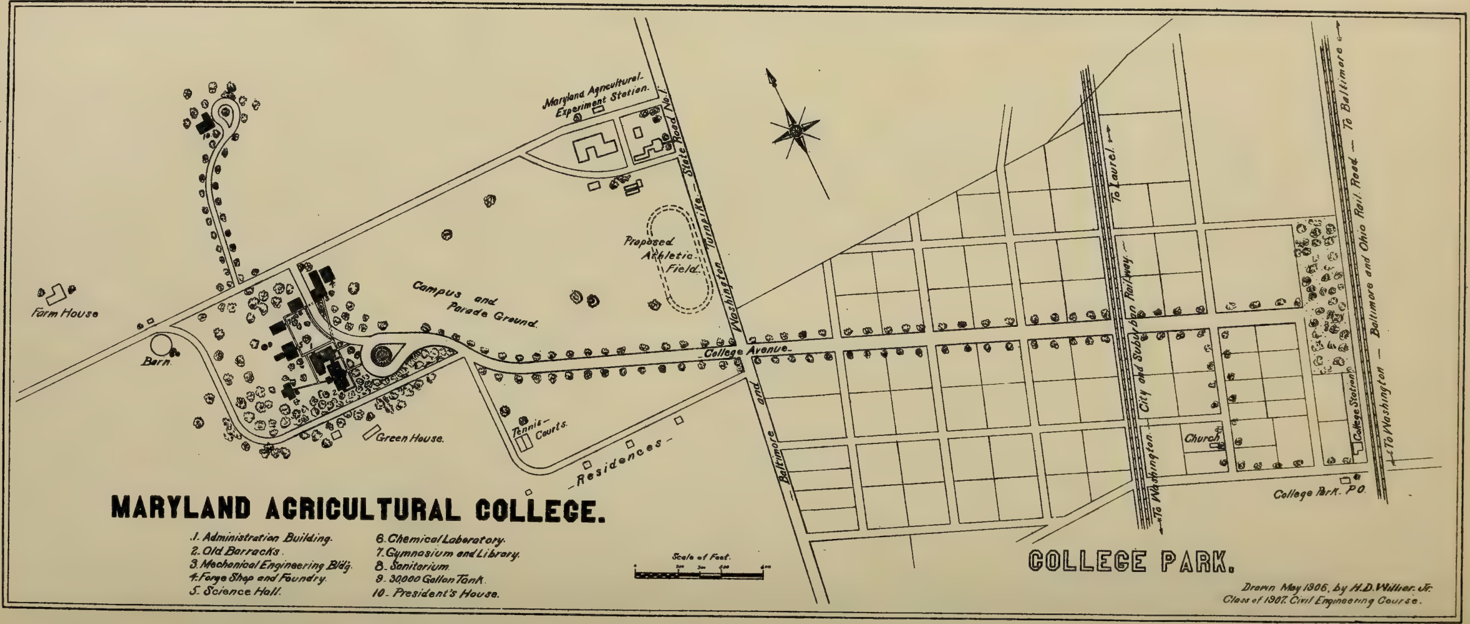
MAP SHOWING LOCATION OF

MARYLAND AGRICULTURAL COLLEGE.

8 7 6 5 4 3 2 1 0 8

8 miles = one inch

A. Hoen & Co Baltimore.



MARYLAND AGRICULTURAL COLLEGE.

Drawn May 1906, by H.D. Willier. Jr.
Class of 1907. Civil Engineering Course.

A.Hoen & Co Baltimore.

electric lighting; lavatories; forced ventilation, etc., all of which establish quarters and class-rooms with unusually good sanitary arrangements.

Under the provisions of the acts of the last State Legislature a modern steam laundry has been added to the equipment and other needed improvements will be secured as required.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of general culture. The purpose of this college is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year his work consists wholly of a few closely connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical work-shops a student is able to become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS OF THE COLLEGE.

- Agriculture—
  - Agronomy.
  - Animal Husbandry.
- Horticulture.
- Forestry.
- Botany and Vegetable Pathology.
- Entomology and Zoology.
- Veterinary Science.
- Chemistry.
- Physics.
- Civil Engineering.
- Mechanical Engineering.
- Mathematics.
- English and Civics.
- Languages.
- Public Speaking.
- Physical Culture.
- Military Science.
- Preparatory.

The following pages give, under the several departments, the general character of the courses offered by each, and the main features of their equipment.

AGRICULTURAL DEPARTMENT.

W. T. L. TALIAFERRO, PROFESSOR.

B. E. PORTER, ASSISTANT IN ANIMAL HUSBANDRY.

COURSES OF STUDY.

The Agricultural Department offers three courses:

I. A four-year course leading to the degree of B. S.

II. A two-year course, for proficiency in which a certificate is awarded.

III. Ten-week winter course, for which credit is given toward the two-year or four-year course.

Education is transforming the farms into veritable workshops, whose products, in the aggregate, more than equal those of any other industry of the country and under the influence of more general intelligence are capable of indefinite extension. In this work there is need of the trained investigator to discover the natural laws which underlie the phenomena of plant and animal life and there is also need of educated farmers with skill and intelligence to receive these principles and apply them in practical farming.

These courses are so arranged as to furnish a good foundation upon which the student may build a successful career as a farmer or develop into a specialist along some line pertaining to the farming industry. The studies to be pursued are recognized as being necessary to fully equip the student for the highest order of work and for the greatest usefulness.

The College farm consists of two hundred and sixty-five acres of land which is operated by the Maryland Experiment Station. Students of the agricultural course are made acquainted with the work of the Station from time to time, and because of the College and Station's close association an excellent opportunity is afforded the student to study the cultivation and growing of crops, the application of manures and fertilizers, the care of stock, the selection of seed from growing crops, the judging of the several classes of animals and all the work of the practical farmer.

LECTURE COURSE IN AGRICULTURE.

This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers cannot fail to produce an excellent effect not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Students taking the Agricultural, Horticultural, Chemical or General Science courses are required to attend these lectures. With other students, attendance is optional.

DIVISION OF AGRONOMY.

W. T. L. TALIAFERRO.

The division of Agronomy takes up the agricultural work pertaining to the field and its crops. A number of courses are offered. These treat of farm crops, their classification, adaptation to soil and climate and methods of culture; soils, their properties and how to care for them and make them more productive and fertile by crop rotation and by the application of manures and fertilizers; farm management, how to make the farm a source of pleasure and profit by employing economic business principles and practices; farm machinery, the kind of tools to use for preparing the land, cultivating and harvesting the crops. A new soil laboratory has been added to this department. In this laboratory the student has an excellent opportunity to study the physical properties of the different kinds of soil. A separate desk and ample apparatus is provided each student to perform experiments for himself.

COURSES OFFERED.

I. Farm Crops. In this course the production of farm crops is considered in detail as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation and harvesting. A special feature is the study of crop improvement by breeding and selection. Very much of this work is of a practical nature in the laboratory or on the farm.

In order to make this a more practical course it is divided into two parts, the first part being given in the spring term and the latter part in the fall term. This division enables the student to take up the various phases of the work in their appropriate seasons.

The texts used are Morrow and Hunt's "Soils and Crops," Shaw's "The Cereals In America," Shamel's "Corn Judging."

Sophomore year, third term; three theoretical and four practical periods per week. Junior year, second term; two theoretical and two practical periods per week; third term, two theoretical and four practical periods.

II. SOILS. The study of the physical and chemical conditions of the soil in their relation to profitable agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text-books, laboratory and field work. No state in the Union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

A well equipped soil laboratory and the wide variety of soils found on the College farm offer exceptional advantages in the theoretical and practical study of this important subject.

The text-book used is "The Soil" by King.

Junior Year, Second Term; 4 theoretical and 4 practical periods per week; first half, Third Term; 2 theoretical and 2 practical periods per week.

III. FARM DRAINAGE. Practical work is open ditching and under drains is provided for the students, on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

The text-book used in this course is Waring's "Drainage for Profit and Health."

Junior Year, Third Term; 2 theoretical and 2 practical periods per week.

IV. PLANT PRODUCTION. This course is intended for those students only who are specializing in agronomy. It consists of field and laboratory work in the study of the handling of fall sown and fall harvested crops. Great attention is given in this course to a careful note-taking and study of the results obtained in breeding work in corn and other fall maturing crops on the Experiment Station farm.

Senior Year, First Term; 4 practical periods per week.

V. FERTILIZERS. Of vital interest to the eastern and southern farmer of the present day, is the fertilizer question. Between it and the profit and loss account is a very close connection and frequently a lack of knowledge of the subject entails upon the farmer both the loss of money paid and the possible increase of the crop. In this course the subject is developed logically from the needs of the plant and the efficiency of the soil to the selecting of the proper plant foods for each crop under varying conditions of soil and climate. Special attention is given to the home mixing of fertilizers.

Senior Year, Second Term; 3 theoretical and 4 practical periods per week.

VI. FARM MACHINERY. Lectures and practical work.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. FARM MANAGEMENT. Lectures.

Senior Year, Third Term; 2 periods per week.

VIII. ADVANCED WORK IN CROP PRODUCTION.

Senior Year, Third Term; 3 theoretical and 6 practical periods per week.

IX. ADVANCED WORK IN SOILS.

Senior Year, Third Term; 3 theoretical and 6 practical periods per week.

X. THESIS AND RESEARCH WORK. To be arranged for with the head of the department.

Senior Year, Second and Third Terms; 2 theoretical and 4 practical periods per week.

GEOLOGY

I. Attention is given chiefly to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions.

Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference.

Freshman Year, First Term; 4 periods per week; Second Term; five periods per week.

DIVISION OF ANIMAL HUSBANDRY

B. E. PORTER.

The division of Animal Husbandry stands for all lines of work which pertain to the judging, selecting, breeding, feeding, development, care and management of the various breeds and classes of domesticated animals. Good herds of stock are being established at the Maryland Agricultural Experiment Station which are of use to the student in his studies. New additions were made to the herd of dairy cattle this last year. The cattle, which were purchased, consisted of one fine Holstein-Friesian bull and several cows and heifers of Holstein-Friesian breeding; also a Guernsey bull together with a number of young heifers. In addition to the supply of stock on the farm the proximity of the College to Washington, Baltimore and the Government Quarantine Station, near Baltimore, makes it possible for the student to get excellent material for study. The Heurich dairy farm, close by, furnishes an excellent example in dairy farming. It is quite evident that there is but one way to make a young man a proficient judge of live stock, and that is by training the eye. In all of the lecture and laboratory work outlined in the courses the work is demonstrated with living specimens.

New dairy barns are being erected at the Station. These are to be models of sanitation. A class-room for judging live stock is being planned for occupancy in the near future.

A growing library of herd-books is available to the student of pedigrees. These books give a fund of information concerning heredity, fecundity, and other breed characteristics.

COURSES OFFERED.

I. Breeds and Scoring. This course is devoted to the detailed study of the breeds of live stock. The practical work commences with a study of the animal form by the use of the score-card. Especial attention is given to the relation of form to function. First, the productive types are firmly fixed in the student's mind; then he takes up more particularly breed characteristics. Judging occupies two double periods two afternoons per week.

Text books in use are "Types and Breeds of Farm Animals," by Plumb, and "Judging Live Stock," by Craig.

Junior Year, First Term; 3 theoretical and 4 practical periods per week.

II. Principles of Breeding. This course takes up the principles of breeding, including selection, heredity, atavism, variation, fecundity, in-and-in breeding, cross breeding and a historical study of their results.

Text book: "Stock Breeding," Miles.

Junior Year, First Term; 3 theoretical periods per week.

III. Livestock Management. Lectures are given on the housing, feeding, care and management of dairy cattle, hogs and horses (Second Term). The housing, feeding, care and management of beef cattle and sheep (Third Term). The practical work in the spring term consists of applications of the work in the lectures, and takes up the drawing of barn plans and other stable conveniences.

Junior Year, Second Term; 2 theoretical periods per week; Third Term; 2 theoretical and 2 practical periods per week.

IV. Dairying. Text books: Wing's "Milk and Its Production," Russell's "Dairy Bacteriology."

Junior Year, Third Term; 3 theoretical and 4 practical periods per week.

V. Stock Judging. Special attention is paid to the judging of groups of animals, similar to county and state fair work.

Senior Year, First Term; 2 double periods (practical) per week.

VI. HERDBOOK. The herdbooks of the breeds of live stock are studied with a view of becoming acquainted with the pedigrees of the leading families of livestock, and the methods of recording the same.

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VII. ANIMAL NUTRITION. This course embraces the principles and practice of animal feeding. After covering the principles of nutrition, it takes up the composition of feeding stuffs, their combination into properly balanced rations, and the relation between the sustenance of animals and their products. Students should have completed courses in Agricultural Chemistry and Comparative Anatomy and Physiology.

Text book: "Feeds and Feeding," Henry.

Senior Year, Second Term; 4 theoretical periods per week. Third Term; 4 theoretical and 4 practical periods per week.

VIII. PROFITABLE STOCK FEEDING. This course treats of the feeding of animals in a most practical manner. Special attention is given to the feeding of breeding stock and the fattening of animals for market. There is no special requirement to enter this course, as in Course VII.

Text book in use is "Profitable Stock Feeding," by H. R. Smith.

Two-year Short-Course students, Second Term of Second Year; 4 theoretical periods per week.

IX. RESEARCH WORK. Upon lines and subjects to be arranged with the department.

The object of this work is to develop independence and originality in the student, and also give him a taste for personal investigation upon lines which are of particular interest to himself.

Junior Year, Third Term; 2 practical periods per week.

X. THESIS AND RESEARCH. The investigations already begun in the Junior Year may be pursued throughout the Senior Year. Other work is to be taken up, and may furnish a basis for the thesis. The time given this work will be arranged with the department.

DEPARTMENT OF HORTICULTURE.

C. P. CLOSE, PROFESSOR.
P. M. NOVIK, LECTURER.
C. A. REED, ASSISTANT.

The Horticultural Department offers two courses: (a) a four-years' course leading to the degree B. S.; (b) a two-years' course for proficiency in which a certificate is awarded.

The instruction in horticulture is specially based upon practical and economical fruit growing, truck farming and commercial floriculture. The orchards, gardens and new greenhouses of the Experiment Station offer to students a splendid opportunity to observe and study modern methods of fruit growing, vegetable growing and the forcing of greenhouse flowers and vegetables. The work in floriculture is supplemented by trips to modern establishments of successful greenhouse men in Baltimore, Washington and vicinity. Similar trips to supplement the work in landscape gardening, truck and fruit growing, are made from time to time. These trips are a portion of the regular work and are often made on Saturday. Usually the expenses are paid by the College.

Additional facilities and equipment are added annually to make the instruction and practice in horticulture thoroughly practical, efficient and up-to-date.

I. Principles of Plant Propagation and Nursery and Greenhouse Management. This is a discussion of the propagation of plants, and their care in the nurseries and greenhouses. Practice is given in ordinary greenhouse and garden work, including the propagation of plants by seedage, cuttage, layerage and graftage, the planting and potting of plants, etc.

Text book: "The Nursery Book," Bailey.

Sophomore Year, First Term; 4 theoretical and 2 practical periods per week.

II. Olericulture I: Vegetable Gardening. This includes the origin, history and botanical relations of garden vegetables.

From economic points of view a careful study is made of the location, of the soil, of fertilizers, and of the general cultivation for vegetable gardens. Instruction is given in the forcing of early and tender vegetables, and in the making and management of hotbeds and cold-frames.

Text book: "Vegetable Gardening," Green.

Junior Year, Second Term; 3 theoretical periods per week.

III. OLERICULTURE II: TRUCK FARMING. A continuation of Course II. A special study is made of truck crops for general market and canning purposes. The selection of soil and locality best adapted for special and extensive vegetable growing, etc., is also considered.

Text book: "Southern Gardeners' Practical Manual," Newman.

Junior Year, Third Term. For students who have taken course II, 3 periods per week; for other students, 2 theoretical and 2 practical periods per week.

IV. PRACTICAL POMOLOGY I: FRUIT GROWING (ORCHARDING). This is a discussion of the principles underlying the growing of orchard fruits. The work begins with the origin of our cultivated fruits and the practical methods of propagating them. Next follows the study of location for orchards and the planting of trees. General care and practice are given in the proper pruning of all classes of fruits. In the College nursery the students propagate all kinds of nursery stock.

Text books: "The Nursery Book," Bailey, and "The Principles of Fruit Growing," Bailey.

Junior Year, First and Second Terms; 2 theoretical and 2 practical periods per week.

V. PRACTICAL POMOLOGY II: SMALL FRUITS. Lectures and practice in the propagation, planting and care of strawberries and bush fruits on a commercial basis.

Text book: "Bush Fruits," Card.

Senior Year, Third Term; 2 theoretical and 2 practical periods per week.

VI. SYSTEMATIC POMOLOGY. This embraces a study of the evolution and relationship of the economic fruits; the study and describing of fruits and fruit trees, the study and drawing of buds, leaves and fruits. Different kinds of fruit are collected from all parts of the State for study and identification by the students.

Text book: "Systematic Pomology," Waugh. References: "The Evolution of Our Native Fruits," Bailey; "The American Fruit Culturist," Thomas, and several others.

Senior Year, First and Third Terms; 2 theoretical and 2 practical periods per week.

VII. HARVESTING, STORING AND MARKETING OF FRUITS AND VEGETABLES. The following points are discussed: profitable marketing of garden and orchard products, harvesting, packing, storing, and marketing of fruits and vegetables, market methods, the middle man, pools and shipping associations, refrigerator cars and cold storage and the utilization of waste and by-products.

Text book: "Fruit Harvesting, Storing, Marketing," Waugh.

Senior Year, First Term; 2 periods per week.

VIII. GREENHOUSE CONSTRUCTION. Lectures and drawing. A study of the materials used for greenhouse buildings, heating systems, etc. A discussion of the different kinds of greenhouses, and their adaptation for different purposes.

Text book: "Greenhouse Construction," Taft.

Junior Year, First Term; 1 theoretical and 3 practical periods per week.

IX. FLORICULTURE I: CULTURE OF CUT FLOWERS. Lectures and greenhouse practice. This course is devoted to a thorough discussion of the special cut-flower business. It includes the propagation, growing and forcing of the most important cut-flower plants; the kind of houses best adapted for special cultures, the studying of varieties, scoring, etc.

Text book: "Greenhouse Management," Taft.

Junior Year, Second Term; 3 theoretical and 2 practical periods per week.

X. FLORICULTURE II: DECORATIVE PLANTS FOR HOUSE AND GARDEN. Instruction is given in the preparation of soils, and the raising of foliage and flowering plants for commercial and decorative purposes; the propagation of annuals and perennials for planting in the garden; the planting of window boxes and hanging baskets, etc. The students are required to name the plants in the College greenhouse and on the campus.

Text books: "Greenhouse Management," Taft; "Practical Floriculture," Henderson.

Junior Year, Third Term; 3 theoretical and 2 practical periods per week.

XI. Plant Breeding. This course commences with a study of theories on evolution and heredity. Then follows a thorough discussion of the modern plant-breeding methods as they are applied in this and foreign countries by important plant breeders. Cross-pollination work is done by the students in the College greenhouse and orchard.

Senior Year, Second and Third Terms; 2 periods per week.

XII. Landscape Gardening. Lectures, designing and practical work. The course commences with a study of the relation of garden architecture, and it continues with a study of the modern garden, the homestead, the playground, the public parks and the cemetery. It embraces a discussion of the technics of making lawns, walks and drives, beds of annuals and perennials, and the planting of trees and shrubs. On the completion of this course students must be familiar with all the trees, shrubs and other ornamentals used on the College lawns and campus.

Text book: "Principles of Landscape Gardening," Waugh, and several references.

Senior Year, First and Second Terms; 4 periods per week.

XIII. Research Work and Thesis. This work is given to the student to test and develop his powers of observation and initiation. The subject will be arranged with each student individually, and the results will be written up for a thesis, which is required of all students of the College.

Junior Year, Third Term; 4 periods per week. Senior year three terms.

XIV. POST-GRADUATE WORK. An opportunity for advanced work is given to candidates who have the B. S. degree.

DEPARTMENT OF FORESTRY

F. W. BESLEY, STATE FORESTER, LECTURER.

The following courses in Forestry are offered: (Course I is included in the weekly lecture course in Agriculture.)

I. GENERAL FORESTRY—Five lectures embodying a general survey of the subject, and its relation to agriculture and other industries. Required Second Term, Senior Year, in Agriculture, Horticulture and General Science Courses.

II. FARM FORESTRY—Includes Forest Botany, Woodlot Management, Measurement and Valuation of Forest Crops, Nursery Practice and Tree Planting. Lectures, recitations and field work.

Text book: "Principles of American Forestry," by Green.

Required Second Term, Senior Year, in Horticulture and Agriculture (Elective in General Science.) Three hours attendance.

WOOD TECHNOLOGY—A study of common commercial woods, their structure, identification, uses and commercial value. Decay of woods and methods of preservation.

Required Second Term, Senior Year, in Mechanical and Civil Engineering. (Optional in Agriculture and Horticulture.) One hour attendance.

DEPARTMENT OF BOTANY AND VEGETABLE PATHOLOGY.

J. B. S. NORTON, PROFESSOR.

*E. I. LICHTI AND E. P. WALLS, ASSISTANTS.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture; for since plants are the subjects dealt with in the

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***During 1906-7 only.**

field and garden, the study of plant life must be one of the fundamental sciences upon which such work is based. In addition to the courses in pure Botany, others of special economic trend are given especially for students in the Agricultural and Horticultural courses, taking up such botanical studies of cultivated plants, plant diseases, etc., as may be useful in practical life to the professional farmer or gardener.

The equipment and means for illustration and demonstration, consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting microscopes, preserved specimens for illustration, a representative collection of Maryland plants; microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Advanced students have opportunity to observe the work being done in the laboratory of Vegetable Pathology and greenhouse of the State Horticultural Department and, if competent, to assist in the same. Special attention is given to students who wish practice in the treatment of plant diseases, as it is the desire of the Department to encourage young men to engage in this work as a business.

I. General Principles. An elementary course in the general principles of anatomy, morphology and physiology of the higher plants. The structure and types of seed, root, stem, leaves, flower and fruit are studied in the laboratory, with a brief consideration of the functions of the different plant organs, a more complete course in plant physiology (III) being given later. This course is a necessary preparation for Course II.

Bergen and Davis' "Principles of Botany" is the principal text book used.

Freshman Year, Second Term; 2 theoretical and 4 practical periods per week.

II. Systematic Botany and Ecology. Principally field work with the manual on the native flora, and designed to give a knowledge of the names of the common Maryland plants and their position in the classification of the vegetable kingdom. The ecology of the plants examined in the field is also taken up, considering their relation to soils, water supply, light and other factors in their environment, cross pollination, dissemination of seeds, plant societies, etc. Each student makes a collection of at least fifty plants from some part of the State.

Reference books used: Gray's "Field, Forest and Garden Botany," Britton's "Manual," Gray's "Manual," Britton & Brown's "Illustrated Flora."

Freshman Year, Third Term; 2 theoretical and 4 practical periods per week.

A combination of I and II is given in the First Term of the two-years' course in Horticulture, and in the Third Term of the two-years' course in Agriculture.

III. Plant Physiology. Lectures and experiments on the life processes of plants; absorption and transfer of water and food materials, photosynthesis, respiration, growth, movement, reproduction, etc.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

IV. Plant Histology. Laboratory work with the compound microscope, studying the minute structure of the tissues and organs of the various types of plants. Each student prepares a series of sections for study with the microscope, from which he makes a set of outline drawings.

Junior Year, Second Term; 8 practical periods per week.

V. Comparative Morphology and Classification. A comparative study of the structure and life history of the principal types of plants from the lowest to the highest. The exercises consist principally of lectures and microscopic studies in the laboratory. The outline of classification of Engler's Syllabus is followed in general.

Junior Year, Third Term; 2 theoretical and 6 practical periods per week.

VI. Economic Plants. Lectures on the names, classification, nativity and uses of the useful and detrimental plants of the world, with field and laboratory studies of the common cultivated plants, with a view of enabling the student of horticulture or agriculture to know the scientific names and relationship of the plants with which he comes in contact in his chosen work.

Reference works: Bailey's Gray's "Field, Forest and Garden Botany," Bailey's "Encyclopedia of Horticulture," etc.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. MYCOLOGY. Lectures and laboratory work upon the common forms of fungi, with special reference enabling the student to recognize those causing plant diseases, and preparatory to VIII.

Text book: Underwood's "Molds, Mildews and Mushrooms."

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VIII. VEGETABLE PATHOLOGY. The causes, symptoms and means of control of plant diseases are studied by means of lectures, microscopic work in the laboratory and experiments in infection and treatment in field and greenhouse.

In addition to the lectures numerous reference books are used.

Senior Year, Second Term; 2 theoretical and 4 practical periods per week.

IX. RESEARCH. Student selecting Botany as a major in the Senior Year devote one term to a completion of an original study of some botanical subject upon which they prepare their graduation thesis.

Senior Year, Third Term; not less than the equivalent of 10 theoretical periods per week.

X. ELECTIVE courses for students of the General Science Course, or for post-graduate students, are offered in Methods in Plant Pathology, Botanical Microchemistry, Histology of Trees, Taxonomy or advanced work in any of the under-graduate courses before mentioned.

General Science students in Botany pursue their elective courses in the first and second terms of the Senior Year for not less than the equivalent of 10 theoretical periods per week, and those pursuing Entomology as a major devote the equivalent of 3 theoretical periods per week throughout the year to Botany.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

T. B. SYMONS, PROFESSOR.
GEORGE P. WELDON, ASSISTANT.

Instruction is given in this Department with a view of giving the student, first, a general knowledge of invertebrate and vertebrate zoology, which is necessary as a foundation science for an agricultural education. Second, to fit the student in elementary and advanced entomology, both economic and systematic, in order that he may pursue this specialty after graduation. A course in economic entomology is given to provide those students who are specializing in any of the allied agricultural sciences with that information which is necessary to their ideal development.

Students wishing to take advanced work in invertebrate zoology here are advised to select some subject in entomology. As the State and Experiment Station entomological work is conducted through this department there are special advantages for students in applied entomology.

The department library contains the majority of the principal entomological publications, which are a great help in advanced work. The laboratory is supplied with a large collection of insects for the use of students and is well equipped with microscopes and other apparatus necessary for practical work in entomology.

The Insectary of the State Horticultural Department and the Maryland Experiment Station, which is joined to the laboratory, affords facilities to a limited number of advanced students for special investigation.

I. Entomology. Lectures, laboratory and field work. This course is designed as an introduction to all the other work in the department. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders and the more important families, the habits and life histories of insects, with special reference to those species that are of economic importance. The laboratory and field work include the study of the more general features of insect anatomy, the determination of some common species and the collection and preservation of insects.

Sophomore Year, Third Term; 2 theoretical and 4 practical periods per week.

II. Zoology. Both invertebrate and vertebrate zoology are discussed in this course. For the time allowed, a very thorough study is made of the classification, anatomy, physiology, characteristics and habits of animals from the lowest to the highest forms. A representative of each of the larger groups is dissected in the laboratory. This course is designed to give the student a general knowledge of zoology.

Junior Year, First Term; 3 theoretical and 6 practical periods per week.

III. Systematic Entomology. Open to students who have taken course I or equivalent. A thorough study of the structure, habits, life histories, and classification of insects. Intended for students wishing to make entomology a specialty.

Junior Year, First and Third Terms; 2 theoretical and 4 practical periods per week.

IV. Economic Entomology. Lectures on applied entomology. Discussion of the more important insect pests and the methods of combating them.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

V. Advanced Entomology. Open only to students who have completed II, III or equivalents. Morphology and ecology of insects. Special and research work will depend upon the ability and special object of the student. This course is given for those who wish to pursue entomology as a profession. Students making botany their major subject will be required to take the equivalent of 3 theoretical periods per week in entomology.

Senior Year; 10 periods per week.

DEPARTMENT OF VETERINARY SCIENCE.

DR. SAMUEL S. BUCKLEY, PROFESSOR.

I. Microscopy. For students in Agricultural and General Science courses. Laboratory exercises in the use and care of the microscope. Methods of examination of fresh and permanent preparations.

Sophomore Year, Second Term; 4 practical periods per week.

II. HISTOLOGY. For students in the Agricultural and General Science courses. The study of cells, and tissues and organs of the animal body. This course is preparatory to Course III, given in the Junior Year.

Sophomore Year, Second Term; 6 practical periods per week.

III. COMPARATIVE ANATOMY AND PHYSIOLOGY. For students in the Agricultural and General Science courses. The elements of physiology with special reference to nutrition. Particular attention is given to the study of classes of animal foods and their digestion.

Junior Year, Second Term; 9 practical periods per week.

IV. VETERINARY ELEMENTS. For students of the Agricultural course, this is a required study.

Senior Year, Second Term; 4 theoretical and 6 practical periods per week.

Note A. Students of the first year in the Two-Years' Agricultural Course will receive instruction under III with the Junior Class, and those of the second year in this course will receive IV with the Senior Class.

Note B. Students of the Short Winter Course in Agriculture will receive instruction in practical veterinary matters and attend lectures upon diseases of animals, 2 periods per week.

DEPARTMENT OF CHEMISTRY.

DR. H. B. MCDONNELL, PROFESSOR AND STATE CHEMIST.

JEROME J. MORGAN, ASSISTANT PROFESSOR.

ASSISTANTS IN STATE WORK,

WM. R. WHARTON, R. C. WILEY, J. I. PALMORE, J. J. T. GRAHAM.

This department is charged with two distinct classes of work:

(1) the State fertilizer and food inspection, and (2) the instruction of students. The State work necessitates the publication of the "Quarterly" bulletin, which is usually made up of the results of the analyses of fertilizers or feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of the State work, the assistants being invariably college graduates. However, this work serves as a valuable object lesson to the advanced students.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room with first-class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and materials are provided from the supply room, as needed.

The department is provided with a small, but well-selected, library of standard reference books on Chemistry, to which additions are made from time to time.

Instruction in Chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals, the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry, which is essential in the education of every man, no difference what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Advanced work in chemistry begins with the Junior year, if the course in chemistry is selected, and the larger part of the student's time is devoted to some branch of theoretical or practical chemistry during the rest of his course, as outlined elsewhere.

The object of the full course in chemistry is to prepare the graduate for positions in agricultural colleges, experiment stations, the United States Department of Agriculture or in various industries that require the services of trained chemists. The demand for our graduates for such positions is far in excess of the supply.

I. General Chemistry. Recitations and practical work in the laboratory where the student performs the experiments under the direction of the instructors. Qualitative analysis is started in this course.

The text book is Remsen's "Introduction to the Study of Chemistry."

Sophomore Year, Three Terms; 4 recitations, and 3 to 4 practical periods per week.

II. Agricultural Chemistry. Text book: Snyder's "Chemistry of Plant and Animal Life."

Junior Year, First Term; 4 periods per week.

III. Qualitative Analysis. Text book: Seller's "Qualitatative Analysis."

Junior Year, First Term; 2 periods, lectures and recitations and 12 periods practical work per week.

IV. Qualitative Analysis. For students taking Horticulture, Agricultural and General Science Courses.

Text book: Seller's "Qualitative Analysis."

Junior Year, First Term; 6 periods practical work per week.

V. Inorganic Preparations. The preparation and purification of inorganic compounds, fractional crystallization, etc.

Junior Year, First Term; 4 practical periods per week.

VI. Quantitative Analysis. Easy analysis, such as the determination of water in gypsum, iron in wire, iron oxide from heating reduced iron, analysis of marble, etc. The work is selected to illustrate general principles.

Reference book: Fresenius' "Quantitative Analysis."

Junior Year, Second Term; 1 lecture and 12 periods practical work per week.

VII. QUANTITATIVE ANALYSIS. For students taking General Science Course. A very brief course illustrating some of the general principles in the quantitative study of chemistry.

Junior Year, Second and Third Terms; 1 theoretical and 4 practical periods per week.

VIII. MINERALOGY. This is a course in determinative mineralogy. The most important minerals are identified by their most characteristic physical and chemical properties, the blowpipe being an important aid.

Text book: Brush's "Determinative Mineralogy and Blowpipe."

Junior Year, Second Term; 1 lecture and 4 periods practical work.

IX. ORGANIC CHEMISTRY. Recitations and lectures.

Text book: Remsen's "Organic Chemistry."

Junior Year, Second Term, 2 periods; Third Term, 3 periods; Senior Year, First Term, 3 periods per week.

X. ORGANIC PREPARATIONS. The preparation in the laboratory of some of the typical organic compounds, determination of boiling and melting points, lowering the freezing point by substances in solution, and combustion methods for determination of carbon, hydrogen and nitrogen.

Reference books: Levy's "Organische Praeparate," and Remsen's "Organic Chemistry."

Senior Year, Second Term; 16 periods practical work per week.

XI. VOLUMETRIC ANALYSIS AND ASSAYING. This course will be mostly Acidimetry and Alkalimetry, the determination of iron, chlorine, silver, etc., by volumetric methods; and the fire assay of gold, silver and lead ores.

Reference books: Sutton's "Volumetric Analysis" and Brown's "Assaying."

Junior Year, Third Term; 2 lectures and 16 periods practical work per week.

XII. THEORETICAL CHEMISTRY. This course will cover the most important elements of this branch of the science, such as atomic and molecular weights, valence, solutions, etc.

Text book: Remsen's "Theoretical Chemistry."

Senior Year, First Term; 2 periods per week.

XIII. AGRICULTURAL CHEMICAL ANALYSIS. This is a thorough course in the analysis of fertilizers and fertilizing materials, feeding stuffs, butter, milk, sugar, starch, etc.

Text book: "Methods of Analysis of the Association of Official Agricultural Chemists."

Senior Year, First Term; 20 practical periods per week.

XIV. INDUSTRIAL PHYSICAL AND ELECTROLYTIC CHEMISTRY. This course is intended to broaden the foundation of the student in chemistry and the parts of the subjects covered will be selected with special reference to the bearing on agricultural chemistry.

Reference books: Thorp's "Industrial Chemistry," Jones' "Physical Chemistry" and Smith's "Electrolytic Chemistry."

Senior Year, Second and Third Terms; 6 periods, lectures and recitations and 4 periods of laboratory work per week the second term, and 5 periods, lectures and recitations during the third term.

XV. RESEARCH. This will occupy nearly all of the student's time in the laboratory. The results will be embodied in the graduating thesis.

Senior Year, Third Term; 20 periods per week.

The hours mentioned for practical work in the laboratory are intended to be the minimum. The best students put in considerably more time than this, the laboratories being open to advanced students till 5 o'clock in the evenings and on Saturdays till noon. Energetic students are glad to avail themselves of these opportunities.

DEPARTMENT OF PHYSICS.

DR. T. H. TALIAFERRO, PROFESSOR.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

I. Elementary Physics. The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical applications of the principles studied.

Text: Carhart & Chute's "High School Physics."

Sophomore Year, First and Second Terms; 2 periods per week.

II. Physics. The course begins with a review of mechanics, after which heat, sound, electricity and magnetism, and light are taken up successively by lectures, recitations, problems and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation and accuracy in making precise measurements. Written reports of the work done in the laboratory are required weekly.

Text books used: Ames' "Theory of Physics," and Ames and Bliss' "Manual Experiments in Physics."

Junior Year, Three Terms; 4 periods class-room work, and 4 periods laboratory work per week.

More advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF CIVIL ENGINEERING.

DT. T. H. TALIAFERRO, PROFESSOR.

The scope of the work of this department is indicated by the courses outlined below, which include theoretical and practical surveying, certain branches of applied mathematics, drawing, designing of structures and engineering construction. Fundamental principles are emphasized, and an effort is made to develop in the student a habit of self reliance in the application of these principles. Opportunity is given for considerable practice in the use of surveying instruments and in drafting. At present the instruction in drawing, graphic statics and structural designing is given by the Mechanical Engineering Department. The subjects named below form a part of the required work in the course in Civil Engineering and the complete curriculum of the course is to be found in the Snyopsis of Courses.

I. SURVEYING. The course includes the use and adjustment of engineering instruments; the methods of land surveying; the plotting and computing of areas; dividing of land; the theory of the stadia; true meridian lines; leveling; topographical surveying; railroad curves, and cross sectioning. The department is equipped with two surveyor's compasses, a Gurley transit with solar attachment, and a 20-inch Gurley level.

Texts: Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual."

Junior Year, three Terms; 1 period per week, class-room work and 5 periods of field practice First Term; 2 periods per week, class-room work, 3 periods per week field practice, Second and Third Terms.

II. TOPOGRAPHICAL DRAWING. Practice in free-hand lettering, maps, profiles, topography, etc.

Junior Year, three Terms; 6 periods per week First Term; 8 periods Second Term, and 4 periods Third Term.

III. STRUCTURAL DESIGNING. Including roofs and bridges. Text book: Thompson's "Bridge and Structural Design."

IV. STRENGTH OF MATERIALS. Treating of the elasticity and resistance of materials of construction and the mechanics of beams, columns and shafts.

The text used is Merriman's "Mechanics of Materials." A knowledge of integral calculus is required for entrance to the course.

Senior Year, First Term; 4 periods per week.

V. HYDRAULICS. Text book: Merriman's "Hydraulics."

Senior Year, Second and Third Terms; 2 periods per week.

VI. Railway Engineering. Preliminary and location surveys, cross sectioning, calculation of quantities, etc.

Text book: Searles' "Field Engineering."

Senior Year, First Term; 2 periods per week class-room work, 8 periods per week field work.

VII. Highway Engineering. Location, construction and maintenance of roads.

Texts: Spalding's "Roads and Pavements" and the reports of the Highway Division of Maryland Geological Survey.

Senior Year, Third Term; 3 periods per week.

VIII. Practical Problems in Surveying and Engineering. In 1904-'06 the work was as follows: Location of a spur track from the B. & O. R. R. to the College; design of a drainage system for agricultural purposes for a portion of the College farm; location of a true meridian line by several methods; location of electric railway to College; plan for athletic field.

Senior Year, Second and Third Terms; 8 to 12 practical periods per week.

DEPARTMENT OF MECHANICAL ENGINEERING.

HARRY GWINNER, PROFESSOR.

ENOCH F. GARNER, ASSISTANT.

HOWARD L. CRISP, ASSISTANT.

This department offers a four-years' course to those who desire to prepare themselves to design and construct machinery or superintend engineering establishments. The design of the course is to furnish such theoretical instruction and engineering practice as will prepare its graduates for immediate usefulness in the factory and office, and after a moderate amount of professional experience, enable them to fill positions of trust and importance in this profession.

Instruction is given by means of lectures and recitations, accompanied by a large amount of practice in the drafting rooms and shops.

The course leads to the degree of B. S. in Mechanical Engineering upon the satisfactory completion of the work as outlined in the Synopsis of Courses.

Equipment. The Mechanical Engineering Laboratories consist of a two story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and two lecture rooms; a one story brick building, in which is the forge shop and foundry, and an annex, 25 by 50 feet, containing the boilers, which furnish steam for power, heat and experimental purposes, and the electric lighting equipment.

The wood-working shop contains accommodations for students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, and a grindstone.

In the forge shops are sixteen power forges, one hand forge, a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths' tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour; a brass furnace, one Mellett core oven, and with the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 22-inch Fifield engine-lathe, with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine-lathes, one 24-inch Gray planer, one 16-inch Smith and Mills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

An 8- by 12-inch engine drives the machinery of the wood-working and machine shops. It was presented to the College by the City of Baltimore, and secured through the efforts of Rear Admiral John D. Ford, of the United States Navy. This engine will be replaced at the opening of the next session by a 9- by 14-inch automatic cut-off, high speed engine, built by members of the Junior and Senior Classes, after the standard design of the Atlas engine. A 10-horse-power Fairbanks gasoline engine drives the blowers in the foundry and forge shops.

The drafting room is well equipped for practical work, having suitable benches, lockers and blue-print facilities.

I. MECHANICAL DRAWING. Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being enclosed in covers properly titled by the students.

Text book: Rouillion's "Mechanical Drawing."

Freshman Year, Three Terms; 6 periods per week.

II. FREEHAND DRAWING. Straight and curved lines, lettering, leaves, plants and ornaments.

Freshman Year, First Term; 6 periods per week.

III. TECHNICAL INSTRUCTION. Explanation of the reading of mechanical drawings; the proper cutting angles, care and adjustment of carpenter tools; relative strength of wood joints; wood, its shrinking and warping, and how to correct and prevent. Drill in problems in arithmetic, algebra and drawing by notes and lectures.

Text book: Goss' "Bench Work in Wood."

Freshman Year, First Term; 3 periods per week.

IV. WOOD WORK. During the first term is taught the use and care of bench tools, exercise in sawing, mortising, tenoning and laying out work from blue prints. The second term is devoted to projects involving both construction, decoration and wood turning. During the third term is taught the principles and processes of pattern making, together with enough foundry work to demonstrate the uses of pattern making.

Freshman Year, three terms; 6 periods per week.

V. MECHANICAL DRAWING. Detailing of machinery and drawing to scale from blue prints. Tracing and blue printing, and representation of flat and round surfaces by ink shading.

Text book: Rouillion's "Mechanical Drawing."

Sophomore Year, three Terms; 4 to 6 periods per week.

VI. ELEMENTARY APPLIED MECHANICS. Transmission of power by belts and pulleys; the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting and bending moments of beams.

Jamieson's "Applied Mechanics" is the text used.

Sophomore Year, First Term; 4 periods per week.

VII. Blacksmithing. The making of the fire and how to keep it in order. The operations of drawing-out, upsetting and bending of iron and steel, including the calculations of stock for bent shapes. Welding. Construction of steel tools for use in the machine shop, including tool dressing and tempering. Annealing.

Sophomore Year, First and Second Terms; 6 periods per week.

VII. Foundry Work. Moulding in iron and brass. Core making. The cupola and its management. Lectures on the selection of irons by fracture, fuels, melting and mixing of metals.

Sophomore Year, Third Term; 8 periods per week.

IX. Descriptive Geometry. Its relation to mechanical drawing and the solution of problems relating to magnitudes in space bearing directly upon those principally used by the mechanical engineer.

Text book: Fauce's "Descriptive Geometry."

Sophomore Year, Second and Third Terms; 3 periods per week.

X. Elementary Machine Design. Freehand sketching of the details of machinery and making working drawings of same. Calculations and drawings of a simple type of steam engine. Notes and lectures.

Junior Year, three Terms; 6 periods per week.

XI. Machine Work. Elementary principles of vise and machine work, which include turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

Junior Year, three Terms; 6 periods per week.

XII. Steam Engines and Boilers. The principles of steam and the steam engine, the slide valve and valve diagrams, the indicator and its diagram; steam boilers, the various types and their advantages.

Text used is Jamieson's "Steam and Steam Engines."

Junior Year, First Term; 4 periods per week.

XIII. Power Plants. Lectures on the location, construction, equipment and engineering of power plants.

Text book: Hutton's "Mechanical Engineering of Power Plants."

Senior Year, Second Term; 3 periods per week.

XIV. Machine Design. The calculation and design of pipes, belt and tooth gearing, beams and cranes.

Text book: Low & Bevis' "Machine Drawing and Design."

Senior Year, three Terms; 6 periods per week.

XV. Graphic Statics. The theory and practice of the graphical method of determining stresses in cranes, roof trusses and bridges and stress on beams and girders due to traveling loads.

Text used: Merriman and Jacoby's "Graphic Statics."

Senior Year, First Term; 4 periods per week.

XVI. Machine Shop Work. Advanced machine work; the laying out, assembling and construction of some piece of machinery such as an engine-lathe or dynamo.

Senior Year, three terms; 8 periods per week.

XVII. Experimental Engineering. Determining the amount of moisture in steam. The efficiency of the injector. The transit and its use. Indicator practice, including the use of the planimeter. Slide valve setting. The slide rule and micrometer.

Senior Year, Third Term; 6 periods per week.

DEPARTMENT OF MATHEMATICS.

R. W. SILVESTER, PROFESSOR.

HENRY T. HARRISON, ASSISTANT.

T. H. TALIAFERRO, ASSISTANT.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in Mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry (plane and spherical), descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

I. Elementary Mathematics. General Review.

Freshman Year, First Term; 3 periods per week.

II. Algebra. Text book: Wentworth's "College Algebra."

Freshman Year, three Terms; 5 periods per week, First Term; 8 periods, Second Term; 3 periods, Third Term.

III. Plane Geometry. Text book: Wentworth's "Plane Geometry."

Freshman Year, Third Term, Sophomore Year, First Term; 5 periods per week.

IV. Solid Geometry. Text book: Wentworth's "Solid Geometry."

Sophomore Year, Second Term; 5 periods per week.

V. Trigonometry. Text book: Wentworth's "Plane Trigonometry."

Sophomore Year, Third Term; 6 periods per week.

VI. Analytical Geometry. Text book: Wentworth's "Analytics."

Junior Year, First Term; 5 periods per week.

VII. Differential Calculus. Text book: Osborne's.

Junior Year, Second Term; 5 periods per week.

VIII. Integral Calculus. Text book: Osborne's.

Junior Year, Third Term; 5 periods per week.

DEPARTMENT OF ENGLISH AND CIVICS.

F. B. BOMBERGER, PROFESSOR.

CHARLES S. RICHARDSON, ASSISTANT.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. Clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all, for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, literature, English and American, theoretical and practical rhetoric, logic, psychology, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first year is devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current, social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

I. Language and Composition. English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Work in composition consists of the preparation of twelve themes upon assigned topics.

Texts used: Lockwood's "Lessons in English," Buehler's "Exercises in English" and Swinton's "Word Analysis."

Freshman Year, three Terms; 5 periods per week.

II. American Literature. A study of the most important writers with a view to giving the student an exact knowledge of their works.

Text used: Watkin's "American Literature."

Freshman Year, Third Term; 3 periods per week; Sophomore Year, First Term; 4 periods per week.

III. Rhetoric and Composition. Principles and practice of rhetoric and composition. Work in rhetoric consists of a study of the principles of diction, the sentence, the paragraph, the discourse, forms of prose, and the nature, form and structure of poetry.

Work in composition consists of twelve themes, illustrating special processes.

Text used: Lockwood's and Emerson's "Composition and Rhetoric."

Sophomore Year, First and Second Terms; 4 periods per week.

IV. English Literature. Study of the history and chief writers of English literature.

Text used: Stopford's Brooke's "English Literature."

Sophomore Year, Third Term; 3 periods per week.

V. Composition. Practice in English Composition. Special lectures. Work in composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the third term.

Junior Year, three Terms; 1 period per week.

VI. English Literature. Text books: Pancoast's "English Literature," Halleck's "English" and Taine's "English Literature."

Junior Year, First Term; 5 periods per week.

VII. Logic. Principles and practice of logic.

Text used: Jevon's Hill's "Logic."

Junior Year, Third Term; 4 periods per week.

VIII. English Classics. Critical study of English classics.

Senior Year, three Terms; 4 periods per week.

IX. Psychology. Principles of Psychology. Text book and lectures.

Text used: Dewey's "Psychology."

Senior Year, First Term; 4 periods per week.

X. Composition. Advanced work in English Composition. Special lectures. Eight themes illustrating special processes.

Senior Year, three Terms; 1 period per week.

HISTORY COURSES.

I. English History. Study of the outlines of English history.

Text used: Montgomery's "English History."

Freshman Year, First Term; 4 periods per week.

II. Ancient History. Outlines of ancient history. Text book and lectures.

Text used: Myers' "Ancient History."

Freshman Year, Second and Third Terms; 4 and 3 periods per week.

III. Current Topics. Senior Year.

CIVICS COURSES.

I. Civics. Civil Government in the United States.

Text books used: Fiske's "Civil Government," Hindsdale's "American Government" and Clark's "Outline of Civics."

Junior Year, Second and Third Terms; 3 periods per week.

II. Business Law. Lectures on business law as used in every-day life.

Text used: Parson's "Commercial Law."

Senior Year, First Term; 3 periods per week.

III. Political Economy. Principles of political economy and industrial development of the United States, economic science and current problems.

Text used: Walker's "Political Economy."

Senior Year, Second and Third Terms; 4 periods per week.

DEPARTMENT OF LANGUAGES.

THOMAS H. SPENCE, PROFESSOR.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German. Students in the General Science Course may elect to take Latin in the Freshman year.

The course of study in Latin is given with two ends in view—first, to train the mind into accurate and close methods of reasoning; second, to give the student a more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin forms and terminations.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, frequently there are no English versions of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the special line of work, which he may be pursuing. The study of French (I, II) is offered as an option in the Senior year.

LATIN COURSES.

I. Grammar and Composition. For students of the Freshman class who elect Latin in place of History.

The aim of this course is to give the student a familiarity with Latin forms and terminations, and enable him to read simple Latin prose.

Text books: Gildersleeve's "New Latin Primer," Collier and Daniel's "First Year Latin," or Bingham's "Latin Grammar."

Freshman Year, three Terms; 4 and 3 periods per week.

GERMAN COURSES.

I. Grammar and Conversation. Text book: Otis' "Elementary German."

Sophomore Year, Third Term; 5 periods per week.

II. Translation. Text books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europeas," Walther's "Algemeine Meereskunde," Northrup's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Junior Year, three Terms; 3 periods per week.

III. Translation of Scientific German. Selected readings from various texts and periodicals.

Senior Year, three Terms; 4 periods per week.

FRENCH COURSES.

I. Grammar and Composition. Text book: Whitney's "French Grammar."

Sophomore Year, First Term; 4 periods per week.

II. Translation. Text books: Super's "French Reader," Rougemont's "La France," Fenelon's "Telemaque," Herdler's "Scientific French Reader," also French scientific periodicals.

Sophomore Year, Second and Third Terms; 4 periods per week. Alternative with German (III) in Senior Year; 5 periods per week.

DEPARTMENT OF PUBLIC SPEAKING.

CHARLES S. RICHARDSON, PROFESSOR.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

I. Articulation, accent, modulation, force and elocutionary pause; expressive management of the body, attitude and motion. Selections of poetry and prose are read and declaimed by students.

Freshman Year, First Term; 1 period per week.

II. Simple lectures on orators and oratory. Methods of analysis and subjects for orations. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Freshman Year, Second Term; 2 periods per week.

III. A review of all the work of the Freshman Year. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc.). Lectures on ancient and modern orators, with readings and declamations, by students, from orations.

Sophomore Year, First Term; 1 period per week.

IV. Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day as Tariff, Currency, Territorial Expansion, Trades Unions, Trusts, Federal Control of Public Utilities, etc. Lectures on parliamentary law.

Sophomore Year, Second Term; 2 periods per week.

DEPARTMENT OF PHYSICAL CULTURE.

CHARLES S. RICHARDSON, DIRECTOR.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastic and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory and Freshman years.

Three periods per week, Preparatory and First and Second Terms, Freshman Year.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

MILITARY DEPARTMENT.

EDWARD LLOYD, MAJOR, U. S. A., COMMANDANT.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

DISCIPLINE.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent, and his parents or guardian must at once remove him from the College.

MILITARY PROMOTIONS.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class. These officers are required to serve for the year, performing all duties imposed by the regulations of the College as a part of their regular course of training. Their conduct as officers will be rated as a study, having a value of five (5) theoretical periods per week, and a quarterly grade will be given. Failure to perform such duties shall constitute a deficiency, causing forfeiture of both diploma and commission. All members of the Senior Class will be required to perform these duties. All seniors with quarters in barracks will be required to drill either as officers or privates. Sergeants are selected from the Junior Class, and corporals from the Sophomore Class. Exceptions will be made to this order, only when the number of men in any one class qualified for promotion is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

UNIFORM.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

PREPARATORY DEPARTMENT.

HENRY T. HARRISON, PRINCIPAL.

CHARLES S. RICHARDSON, ASSOCIATE.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

I. ARITHMETIC. Wentworth's "Grammar School Arithmetic," completed.
First and Second Terms; 10 periods per week.

II. ARITHMETIC. Advanced work.
Third Term; 5 periods per week.

III. ALGEBRA. Wentworth's "Algebra" as far as quadratics.
Three Terms; 5 periods per week.

IV. HISTORY. United States History, completed.
Three Terms; 4 periods per week.

V. GEOGRAPHY. Descriptive Geography, completed.
First Term; 5 periods per week.

VI. GEOGRAPHY. Davis's "Physical Geography." Completed.
Second Third Terms; 4 periods per week.

VII. ENGLISH. Spelling, technical grammar, parsing, and analysis, composition, letter writing and elocution.
Three Terms; 8 periods per week.

VIII. BOOK-KEEPING. Single Entry.
Third Term; 5 periods per week.

THE COLLEGE LIBRARY.

F. B. BOMBERGER, LIBRARIAN.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several hundred volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a large number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

Grateful acknowledgment is made to the following for valuable additions to the College Library: Johns Hopkins University—Reports of Geological Survey, Weather Service and Highway Commission; the United States Department of Agriculture Bulletins, Year Books and daily Weather Maps; and the county press for copies of their publications.

COURSES OF STUDY.

In order to systematize the work of the different departments of the College, and as far as possible arrange for specialization within limits consistent with the normal development of individual students, six distinct courses of study have been prepared, one of which the student is expected to choose upon entering the regular college work.

These courses are Agriculture, Horticulture, General Science, Chemistry, Mechanical Engineering and Civil Engineering.

A continuous and progressive course of work, beginning in the Freshman year with a nearly uniform course for all students and gradually separating in the three succeeding years until the class-work is almost wholly specialized has been found to be most satisfactory. A broad and liberal foundation in English, fundamental mathematics and history is first laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the tabular statement of the courses the hours per week are given, the numbers in parenthesis denoting practical or laboratory periods, others theoretical or recitation periods.

AGRICULTURAL COURSE.

The agricultural course is designed to fit the student for conducting practical operations on the farm or, should taste or circumstance so direct, to successfully prosecute advanced scientific research along the lines of agronomy or animal husbandry. With this end in view the course has been made at once comprehensive and technical, comprehensive enough to include whatever is necessary for the complete development of the work yet technical enough to make the student feel that he is a specialist and equipped for special work.

The agricultural course is the result of development. While a man must specialize to attain any eminent success, yet in agricultural science it is not possible to specialize to the same degree as in some others, because it is itself made up of many sciences. Experience has clearly shown also that in agriculture the practical must keep even pace with the theoretical, that true education trains the eye and hand as well as the intellect and should give to the student the ability not only to acquire and originate ideas but also to express them in words and deeds.

Throughout the Freshman year and the first two terms of the Sophomore year the course is non-technical.

At the beginning of the third term of the Sophomore year, agronomy, the production of farm crops, is taken up by all students of agriculture.

In the Junior year the course is divided into two sections, known as the Division of Agronomy and the Division of Animal Husbandry. This arrangement enables the student to specialize along which ever line accords with his interests or desires, while at the same time he is taught the fundamental facts of both. This enables him to see most clearly, and to harmonize his work to, the relations which must exist between these great branches of agriculture.

TWO-YEARS' COURSE IN AGRICULTURE.

A large number of young men seeking to better themselves in their chosen profession of farming are calling for instruction in those courses pertaining to practical agriculture. Many of them have neither the time nor means at hand to take the full four-years' course, but while away to school they wish to gain the greatest possible amount of instruction and assistance which is particularly applicable to the farm. The farm can no longer be run in the old-time haphazard way. There is a demand for skill and the highest order of intelligence to make a success on the farm, as in any other line of human endeavor. Brains must be planted with each little seed, and again put into the feeding trough for the animal. To meet the demand for instruction along these lines, and for a better understanding of the underlying principles of successful agriculture, a short course of two years has been provided.

It embraces much of the technical work of the four-years' course, and is especially designed to lay a foundation that will secure success in practical farming, which, as it must be conducted today, is a union of many interests. To enter this course a working knowledge of arithmetic, including fractions, mensuration and percentage, and a common-school training in English, is required.

Upon completion of this course a certificate is granted, taking the place of the diploma for the four-years' course.

SPECIAL WINTER COURSE IN AGRICULTURE.

A ten-weeks' course, designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-years' course; this solves the problem for them.

Each student will be required to take not less than two hundred and fifty hours of work. Two hundred of these must be devoted to the following specified studies:

Soils, 22 hours.
Farm Dairying, 40 hours.
Manures, 20 hours.
Plant Production, 25 hours.
Agricultural Chemistry, 20 hours.
Farm Live Stock, 18 hours.
Stock Feeding, 15 hours.
Horticulture, 40 hours.

The other fifty hours will be devoted to such topics as the student may elect from the following: Veterinary Science, 40 hours; Tobacco, 5 hours; Plant Physiology and Pathology, 15 hours; Economic Entomology, 20 hours; Carpentering and Blacksmithing, 45 hours; Farm Accounts, 12 hours; Road Construction and Leveling, 5 hours; Civil Government, 10 hours.

Tuition and room free. No expense for use of laboratories or supplies. Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within a short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College at $40.00 for the course. Students will be expected to furnish their own bed clothes, pillows, towels, napkins and overalls for dairy work. Short course students are not required to drill or wear uniforms.

HORTICULTURAL COURSE.

The Horticultural Course is designed to give practical and scientific instruction in the great productive occupation of Horticulture, for which Maryland is so naturally adapted. Practical work in orchard, garden and greenhouse is made a prominent feature of the course, especially in its early part, which is designed to train young men in all the details of general fruit and truck growing. In this work the orchards, nursery and vineyard of the College and Experiment Station, which contain a great many varieties of all hardy commercial fruits, are used for practice and demonstration.

In the Freshman and Sophomore years the work is not materially different from that of the Agricultural and General Science courses, but in the Junior and Senior years the subjects of the course become grouped and specialized, and include a thesis upon some horticultural topic.

The advanced work in Horticulture is built on the practical work before outlined, but tends to the scientific side, and the training of men for scholastic and experimental work in colleges, experiment stations, or in the Department of Agriculture. Excursions are made by the students to floral establishments in Baltimore and Washington to note and study the commercial aspects of floriculture. Models in landscape architecture and treatment are furnished by the parks and government grounds in and about the national capitol. The State Horticultural Society, by its meetings and exhibitions, affords the horticultural students of the College excellent training in the work of identifying, noting and judging fruit and vegetables.

TWO-YEARS' COURSE IN HORTICULTURE.

The two-years' course in Horticulture is intended for young men who wish to devote themselves to fruit and vegetable growing, or to commercial nursery or flower business, and who cannot afford the time required for a regular college course.

The course includes practically all of the subjects given in the Department of Horticulture, and those of the courses in Agriculture that are of importance for the study of general horticulture. Besides these, there is also a good training in English Language, Botany, Entomology and Chemistry.

Upon finishing the course the student gets a certificate, which gives him credit for the work he has completed at the College.

GENERAL SCIENCE COURSE.

The General Science Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science. The basis of this course is a thorough training in mathematics, English and the principles of citizenship and government.

The scientific work of this includes Agriculture, Horticulture, Botany, Physics, Chemistry, Entomology, Zoology and Veterinary Science. In his first two years the student receives a general introduction to the several sciences, one of which in his Junior and Senior Year becomes his choice for more detailed work. A thesis upon some topic in the selected field completes his course, and entitles him to the degree of Bachelor of Science.

MECHANICAL ENGINEERING COURSE.

The work of the several years of this course differs from the preceding courses (Agricultural, Horticultural and General Science) mainly in the omission of those subjects of a biological character and inclusion of mathematics and shop work. The shop work supplements the mathematical, especially in the last two years, when problems in machine design are worked out, so far as time allows in the actual construction of the parts designed. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements used in wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. Results have shown that students completing this course have no difficulty in securing employment immediately upon graduation in the field of mechanics or mechanical engineering.

CIVIL ENGINEERING COURSE.

The Civil Engineering course offers a young man an opportunity to obtain a preliminary training in civil engineering that will enable him to engage in practical engineering work in the field or in the drafting room with the assurance that he has the necessary preparation to profit by the experience thus afforded; or if he desires to pursue a more extended course at a technical school of higher grade, he will be entitled to advanced standing. The curriculum, which is outlined on following pages, includes studies of cultured value, the fundamental sciences which form the basis of engineering, and work of a technical character. Students who have found themselves deficient in ability to learn mathematics are not advised to enter an engineering course. Upon the satisfactory completion of this course the degree of Bachelor of Science, in Civil Engineering, is conferred.

CHEMICAL COURSE.

The Course in Chemistry is essentially the same as the General Science Course until the beginning of the Junior year, though any of the four-year courses would prepare for this, as the amount of chemistry is the same in all courses to the end of the Sophomore year, and the demands on the agricultural or technical chemist are now so varied that a foundation with more of the essentials of the agricultural or the mechanical courses is often desirable.

Beginning with the Junior year the major part of the student's time is devoted to chemistry, the practical work in the laboratory occupying approximately half of his time. The course is essentially a course in agricultural chemistry fitting the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture.

SYNOPSIS OF COURSES—FRESHMAN YEAR

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E. Civil Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM				SECOND TERM				THIRD TERM			
	Ag.A.H.H.	Ch. G.S.	C. E.	M. E.	Ag.A.H.H.	Ch. G.S.	C. E.	M. E.	Ag.A.H.H.	Ch. G.S.	C. E.	M. E.
Elementary Mathematics (Math. I)	3	3	3	3								
Algebra (Math. II)	5	5	5	5	8	8	8	8	3	3	3	3
Plane Geometry (Math III)									5	5	5	5
Language and Composition (Engl. I)	5	5	5	5	5	5	5	5	5	5	5	5
American Literature (Engl. II)									3	3	3	3
*English History (Hist. I)	4	4	4	4								
*Latin Grammar and Comp. (Latin I)	4	4	4	4	4	4	4	4	3	3	3	3
*Ancient History (Hist. II)					4	4	4	4	3	3	3	3
Elocution I and II	1	1	1	1	2	2	2	2				
Physical Culture	(3)	(3)	(3)	(1)	(3)	(3)	(3)	(3)				
Geology	4	4	4		5	5	5					
Agricultural Lecture	(2)	(2)			(2)	(2)			(2)	(2)		
Elementary Botany (Bot. I)					2(4)	2(4)						
Systematic Botany (Bot. II)									2(4)	2(4)		
Mechanical Drawing (M. E. I)			(6)	(6)			(6)	(6)		(6)	(6)	(6)
Freehand Drawing (M. E. II)	(6)	(6)										
Technical Instruction (M. E. III)				3								
Wood Work (M. E. IV)				(6)				(6)	(6)		(6)	(6)
French Grammar and Comp. (Fr. I)										†3		

* History and Latin alternative.

† French for Chemical Course only.

SYNOPSIS OF COURSES—SOPHOMORE YEAR

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The different courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM					SECOND TERM						THIRD TERM			
	Ag. A. H. H.	Ch.	C. E.	M. E.	G. S.	Ag. H.	A. H.	Ch.	C. E.	M. E.	G. S.	Ag. AH. H. G. S.	Ch.	C. E.	M. E.
Plane Geometry (Math. III)	5	5	5	5	5										
Solid Geometry (Math. IV)						5	5	5	5	5	5				
Trigonometry (Math. V)												5(1)	5(1)	5(1)	5(1)
Rhetoric and Composition (Engl. III)	4	4	4	4	4	4	4	4	4	4	4				
English Literature (Engl. IV)												3	3	3	3
American Literature (Engl. II)			4		4										
Elocution III and IV	1	1	1	1	1	2	2	2	2	2	2				
General Chemistry (Chem. I)	4(3)	4(3)	4(3)	4(3)	4(3)	4(4)	4(4)	4(4)	4(4)	4(4)	4(4)	4(3)	4(3)	4(3)	4(3)
Physics, Elementary (Phys. I)	2	2	2	2	2	2	2	2	2	2	2		2	2	
Mechanical Drawing (M. E. V)	(6)		(6)	(6)					(6)	(4)				(6)	(4)
Applied Mechanics (M. E. VI)			4	4											
Blacksmithing (M. E. VII)				(6)						(6)					
Foundry Work (M. E. VIII)															(8)
Descriptive Geometry (M. E. IX)									3	3				3	3
Plain Propagation (Hort. I)	4(2)	4(2)			4(2)										
Agricultural Lecture	(2)	(2)			(2)	(2)	(2)	(2)			(2)	(2)	(2)		
Farm Crops (Agron. I)												3(4)			
French Grammar and Comp. (Fr. I)		4													
French Translation (Fr. II)								4					4		
*Plant Physiology (Bot. III)						2(4)					*2(4)				
Microscopy (Vet. Sci. I)						(4)	(4)	(4)			(4)				
*Animal Histology (Vet. Sci. II)							(6)				* (6)				
Entomology I												2(4)			
German Grammar and Comp. (Germ. I)												5	5	5	5

*General Science Students may take either Plant Physiology or Animal Histology, according as they intend to follow Botanical or Entomological Courses in the Senior Year.

SYNOPSIS OF COURSES—SENIOR YEAR

The figures represent the number of recitation periods per week. Those in parenthesis indicating practical or laboratory work. The different courses are represented by the abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; M. E., Mechanical Engineering; G. S., General Science,

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM							SECOND TERM							THIRD TERM						
	Ag.	A. H.	H.	Ch.	C. E.	M.E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E,	G. S.
*English Classics (Engl. VIII)	4	4	*4				4	4						4	4						4
*Psychology (Engl. IX)	4	*4	4				4														
English Composition (Engl. X)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Current Topics (Hist. III)															1(1)	1(1)	1(1)	1 (1)	1 (1)	(1)	1(1)
Civics I										3							3				
Business Law (Civics II)	3	3	3	3		3	3														
Political Economy (Civics III)								4	4	4	4	4	4	4	4	4	4	4	4	4	4
*Scientific German (Ger. III)	4	*4	*4	4	4	4	4				4	4	*4	*4				4		*4	*4
*French													*5	*5						*5	*5
Organic Chemistry (Chem. IX)	3(4)	3(4)		3																	
Organic Preparations (Chem. X)											(16)										
Theoretical Chemistry (Chem. XII)				2																	
Agricultural Analysis (Chem. XIII)				(20)																	
Indus., Phys. and Elec. Chem. (Chem. XIV)											6 (4)							5			
Power Plants (M. E. XIII)													3								
Machine Design (M. E. XIV)						2(4)							2(6)							2(4)	
Graphic Statics (M. E. XV)					4	4															
Machine Work (M. E. XVI)						(8)							(8)							(8)	
Experim. Engineering (M. E. XVII)																				3(3)	
Structural Design (C. E. III)					2(4)							2(4)							2 (4)		
Strength of Materials (C. E. IV)					4	4															
Hydraulics (C. E. V)												2							2		
Railway Engineering (C. E. VI)					2(8)																
Highway Engineering (C. E. VII)																			3		
Civil Engineering VIII												(8)							(12)		
Mycology (Bot. VII)			2(2)																		
Vegetable Pathology (Bot. VIII)								2(4)		2(4)											
†Botany IX and Entomology V							†13							†13							†13
Veterinary Science (Vet. Sci. IV)									4(6)												
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Plant Production (Agr. IV)	(4)																				
Fertilizers (Agr. V)								3(4)													
Farm Machinery (Agr. VI)															2(4)		(4)				
Farm Management (Agr. VII)															2	2					
Crop Prod. (Agr. VIII) or Soils (Agr. IX)															3(6)						
Stock Judging (A. H. V)		(4)																			
Herdbook (A. H. VI)		2(2)																			
Animal Nutrition (A. H. VII)									4							4(4)					
Farm Forestry (For. II)								3	3	3				3							
Wood Technology (For. III)												1	1								
Pomology, Systematic (Hort. VI)			2(2)														2(2)				
Small Fruits (Hort. V)																2(2)	2(2)				
Fruit Harvesting, Etc. (Hort. VII)			2																		
Plant Breeding (Hort. XI)								2		2					2		2				
Landscape Gardening (Hort. XII)			2(2)							2(2)											
Research and Thesis		(2)	(4)					2(4)	2(4)	(4)			‡		2(4)	4(4)	(4)	(20)		‡	

* Animal Husbandry students take either Psychology or German; Horticultural Students take either English Classics or German; Mechanical Engineering and General Science Students take either French or German.

† See description of courses; the 12 periods per week includes much practical work.

SYNOPSIS OF COURSES—JUNIOR YEAR

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The differen courses are represented by the abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E.,Civil Engineering M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM							SECOND TERM							THIRD TERM						
	Ag.	A. H.	H.	Ch.	C. E.	M.E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M.E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M.E.	G. S.
Analytical Geometry (Math. VI)					5	5															
Differential Calculus (Math. VII)												5	5								
Integral Calculus (Math. VIII)																			5	5	
English Composition (Engl. V)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*English Literature (Engl. VI)			5				*5														
Civics I								3	3		3	3	3	3	3	3		3	3	3	3
*Logic (Engl. VII)																					*4
German Translation (Germ. II)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Machine Design (M. E. X)					2(4)	2(4)							2(4)							2(4)	
Machine Work (M. E. XI)						(6)							(6)							(6)	
Steam Engines (M. E. XII)						4															
Physics II				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	
Agricultural Chemistry (Chem. II)	4	4	4	4																	
Qualitative Analysis (Chem. III and IV)	(6)	(6)	(6)	2(12)			(6)														
Inorganic Preparations (Chem. V)				(4)																	
Quantitative Analysis (Chem. VI, VII)											1(12)			1(4)							1(4)
Mineralogy (Chem. VIII)								1(4)	1(4)		1 (4)										
Organic Chemistry (Chem. IX)								2	2		2			2	3	3		3			3
Volumetric Analysis (Chem. XI)																		2(16)			
Surveying (C. E. I)	1(5)		1(5)		1(5)							2(3)							2(3)		
Topographical Drawing (C. E. II)					(6)							(8)							(4)		
Zoology (Entom. II)		3(3)					3(6)														
*Systematic Entomology (Entom. III)							*2(4)										2(4)				*2(4)
Economic Entomology (Entom. IV)																					2(4)
Anatomy and Physiology (Vet. Sci. III)									(9)					(9)							
Plant Histology (Bot. IV)										(8)											
Plant Morphology and Classif. (Bot. V)																					2(6)
Economic Plants (Bot. VI)															2(4)		2(4)				
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Farm Crops (Agron. I)								2(2)							2(4)						
Soils (Agron. II)								4(4)	4(4)	4(4)					2(2)	2(2)					
Farm Drainage (Agron. III)															2(2)	2(2)	2(2)				
Breeds and Scoring (A. H. I)	3(4)	3(4)																			
Principals of Breeding (A. H. II)	3	3																			
Live Stock Management (A. H. III)								2	2							2(2)					
Dairying (A. H. IV)																3(4)					
Olericulture (Hort. II, III)										3					2(2)		1(2)				
Pomology (Hort. IV)	2(2)		2(2)					2(2)		2(2)											
Greenhouse Construction (Hort. VIII)			1(3)																		
Floriculture (Hort. IX, X)										3(2)							3(2)				
Research (Hort. XIII, A. H. IX)																(2)	(4)				

* General Science students take English Literature in the First Term and Logic in the Third Term instead of Systematic Entomology if they expect to pursue Botanical courses the next year.

SYNOPSIS OF TWO-YEAR'S COURSES IN AGRICULTURE AND HORTICULTURE

The figures represent the number of recitation periods per week: those in parenthesis indicating practical or laboratory work.
The Roman numerals below are the numbers of courses described in the various departments on preceding pages.

	FIRST YEAR					
	FIRST TERM		SECOND TERM		THIRD TERM	
	Agri.	Hor.	Agri.	Hor.	Agri.	Hor.
English Composition (Engl. I)	5	5	5	5	5	5
Plant Culture (Hort. I)	4(2)	4(2)	....	....	....	....
Farm Crops (Agron. I)	2(4)	2(4)	....	....	2(4)	....
Soil Physics (Agron. II)	....	....	4(4)	4(4)	....	....
Drainage (Agron. III)	....	....	....	....	2(2)	2(2)
General Chemistry (Chem. I)	4(3)	4(3)	4(4)	4(4)	4(3)	4(3)
Breeds and Scoring (A. H. I)	3(4)	....	....	....	....	....
Live Stock Management (A. H. III)	....	....	2	....	2(2)	....
Botany I and II	....	2(4)	....	....	2(4)	....
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Arithmetic	....	3	....	....	....	....
Mechanical Drawing (M. E. I)	....	....	....	(6)	....	....
Entomology (Entom. I)	....	....	....	....	....	2(4)
Vegetable Gardening (Hort. II)	....	....	....	3	....	....
Truck Farming (Hort. III)	....	....	....	....	....	1(2)
Anatomy and Physiology (Vet. Sci. III)	....	....	(9)	....	....	....

	SECOND YEAR					
	FIRST TERM		SECOND TERM		THIRD TERM	
	Agri.	Hor.	Agri.	Hor	Agri.	Hor.
Farm Management (Agron. VII)	....	....	....	....	2	....
Principles of Breeding (A. H. II)	3	....	....	....	....	....
Stock Judging (A. H. V)	(4)	....	....	....	....	....
Fertilizers (Agron. V)	....	....	3(4)	3(4)	....	....
Farm Machinery (Agron. VI)	....	....	....	....	2(4)	2(4)
Animal Nutrition (A. H. VIII)	....	....	4	....	....	....
Grain Judging (Agron. I)	....	....	1(4)	....	....	....
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Woodwork (M. E. IV)	(6)	....	....	....	....	....
English Composition (Engl. V.)	1	1	1	1	1	1
Business Law (Civ. II)	3	....	....	....	....	....
Farm Forestry (For. II)	....	....	3	3	....	....
Pomology (Hort. IV)	2(2)	....	2(2)	....	....	....
Fruit Harvesting (Hort. VII)	2	2	....	....	....	....
Truck Farming (Hort. III)	....	....	....	....	2(2)	....
Agricultural Chemistry (Chem. II, III)	....	4(6)	....	....	....	....
Plant Pathology (Bot. VIII)	....	....	....	2(4)	....	....
Economic Entomology (Ent. IV)	....	....	....	....	2(4)	2(4)
Fruit Growing (Hort. IV)	....	2(2)	....	2(2)	....	....
Small Fruit Growing (Hort. V)	....	....	....	....	....	2(2)
Systematic Pomology (Hort. VI)	....	2(2)	....	....	....	2(2)
Plant Breeding (Hort. XI)	....	....	....	2	....	2
Greenhouse Construction (Hort. VIII)	....	1(3)	....	....	....	....
Floriculture (Hort. IX, X)	....	....	....	3(2)	....	3(2)
Landscape Gardening (Hort. XII)	....	2(2)	....	2(2)	....	....
Freehand Drawing (M. E. II)	....	(6)	....	....	....	....
Dairying (A. H. IV)	....	....	....	....	3(4)	....
Farm Crops (Agron. IV)	....	2(4)	....	....	....	....
Veterinary Science (Vet. Sci. IV)	....	....	4(6)	....	....	....

GENERAL INFORMATION.

REQUIREMENTS FOR ADMISSION.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 18th and 19th, 1907. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic complete, algebra, as far as quadratics, political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic, as far as percentage, United States history and political geography.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present a certificate from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and wood work.

Every applicant for admission to the College must bring satisfactory testimonials as to his character and scholarship from his former teacher. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

EXAMINATIONS AND PROMOTIONS.

In order to pass from one class to the next higher a student is required to pass an examination in each study pursued by a mark of at least sixty per cent. and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical or Civil Engineering Courses will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

REPORTS.

Detailed reports are sent to parents and guardians at the end of every quarter. These give the grade of the student in every branch of study, his attendance record, and his conduct record with comment by the President upon each item.

In addition to this, monthly reports are issued for October, November, January, February and April. These give general information as to scholarship, conduct, attendance and health, and call attention to deficiency in any one of these particulars.

GRADUATION AND DEGREES.

BACHELOR OF SCIENCE.

As a requisite for graduation, the candidate for this degree must, in addition to having satisfactorily completed the work previously outlined, submit a thesis, which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

MASTER OF SCIENCE.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon College graduates of not less than two years' standing, who are employed in any of the departments of the College and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

MASTER OF ARTS.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or theses must be approved by the President of the College, the Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

SCHOLARSHIPS AND FELLOWSHIPS.

COMPETITIVE SCHOLARSHIPS.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted by the Superintendent of Public Instruction of Baltimore City, and in the counties by the County School Superintendent. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present themselves at the College, or other designated place, at the date which may be named in the September or January next following the award, and be examined by College authorities for entrance to the Freshman Class. Alternates are to be thus examined, as well as principals and in case of a failure of the principal to secure or hold the scholarship, the alternate will have the first right to the place, if within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to secure the same, pass the entrance examination of the College, and (if entering in January) such other examination as may be required to join *the Freshman Class. To hold a scholarship, the student must make all payments promptly and meet such requirements of the College as to scholarship and deportment as may be prescribed by the President and Faculty. By passing special examinations, or by presenting satisfactory certificates, candidates for scholarship may be permitted to enter the Sophomore Class."* A student who fails of promotion, thereby forfeits his scholarship and the School Board which granted such scholarship will be notified accordingly.

INDUSTRIAL SCHOLARSHIPS.

There are also offered by the College a limited number of "Industrial Scholarships." The holder of such a scholarship is required to work as a waiter or janitor a definite number of hours per day; these hours are so arranged as to conflict as little as possible with his time for study or recitation. Industrial scholarship students are not required to drill.

In consideration of their work a rebate of $150 a year is granted each of these students.

A selection is made from applicants for this scholarship on the basis of mental preparation, physical ability and moral character. Preference will be given to the sons of citizens of Maryland. Applications for this scholarship specifying age, weight, mental advancement and enclosing testimonial of moral character must be made in writing to the President of the College prior to September 1st, and the successful applicants for this scholarship will be notified to report in person at the College on September the 16th.

STUDENT OPPORTUNITIES.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference.

FACILITIES FOR RELIGIOUS WORSHIP.

The College is undenominational in character. The daily exercises of the College are opened with worship in the College Chapel.

Every Sunday afternoon services are conducted by a minister of some Christian denomination, an effort being made to have all the more prominent churches represented in the pulpit. There is an Episcopal Church at College Park, and at Berwyn one mile north and at Riverdale one mile south are Presbyterian churches. In Hyattsville, two miles south, may be found Catholic, Episcopal, Presbyterian, Baptist and Methodist churches. Students are encouraged to attend the church with which they desire to worship.

COLLEGE REGULATIONS.

The attention of parents is earnestly called to the following rules in force at this College: The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures in a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to parents during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian and received by the President of the College:

"It is understood that the President of the College as the executive of the same, and acting for the Board of Trustees, a party to this contract, *has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations herein set forth."*

A cadet manifesting an indifference to the observance of the rules and regulations of the institution or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so his parents upon notice given by the President must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examinations is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that failure to live up to this pledge is a dishonor which unfits them to be longer inmates of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his *work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.*

Students will not be permitted to leave classes or quarters during study hours to answer telephone calls, unless they are urgent.

Students will not be permitted to make contracts or to sell any article to their associates without the approval of the President.

The sale of second hand furniture or clothing to new cadets is prohibited unless the sale be approved by the commandant of cadets.

The College will not be responsible for articles left in the barracks during vacation, nor for valuables left by students in their rooms at any time. They should be deposited with the College Treasurer who will place them in the College safe and give a receipt therefor.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE, ENDORSED BY THE FACULTY.

1. A student may not change his course of study unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.

2. Examinations to make up conditions will be given only at times set apart by this committee. These dates will be just before the regular quarterly examinations in December, April and June; also the day before the resumption of college work in September. Notice of intention to take these examinations must be filed in writing with the chairman of the schedule committee at least 10 days before examinations commence. Should, for any reason, a special examination be requested at any other time a charge of $2.00 will be made for each subject on which the applicant is examined.

3. To attain proficiency a student must make an examination grade of 60 per cent.; also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent. is required.

4. A student may not be promoted if conditioned in more than one study.

5. A student may not be promoted if he has any conditions of more than a year outstanding.

6. No student may be promoted from the Preparatory Department with any condition.

7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.

8. A student is subject to an oral examination at any time within ten days after written examination.

9. An examination paper, containing erasure or showing alterations. may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.

10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.

11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

13. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the College seal nor the Governor's signature.

14. No student may take work in more than one class during any one term.

STUDENT EXPENSES.

No charge is made for tuition, books or diplomas. No reductions are made for regular vacations.

The expenses of the College year for the several classes of students are as follows:

BOARDING STUDENTS.—Board, heat, light and room $200.00.

SCHOLARSHIP STUDENTS.—Board, heat, light and room $100.00.

DAY STUDENTS.—Room, heat and tuition $40.00.

SHORT WINTER COURSE STUDENTS.—Board, heat, light and room for the course $40.00.

Students entering College after November 1st, or leaving the same prior to the close of the scholastic year will be charged for the time they are here as follows, viz:

Boarding students at the rate of $25.00 per month.

Scholarship students at the rate of $13.00 per month.

Day students at the rate of $5.00 per month.

Students withdrawing after entrance, must pay the charge for at least one month's attendance.

Table board for students not rooming at the College will be $14.00 per month, or 25 cents per meal.

TIME OF PAYMENT.

For Boarding Students $50.00 on entrance, $50.00 November 15, $50.00 February 1st, $50.00 April 1st.

For Scholarship Students, $25.00 on entrance, $25.00 November 15th, $25.00 February 1st, $25.00 April 1st.

For Day Students $10.00 on entrance, $10.00 November 15th, $10.00 February 1st, $10.00 April 1st.

Promptness of payment is essential and must be made in advance, by order of the Board of Trustees.

FEES.

No fees of any character will be charged by the College.

Students will be admitted free of cost to membership in the College Athletic Association.

Damage to College property by students will be promptly reported to parents or guardians and prompt payment expected.

All College property in the possession of the individual student, such as his room, furniture, books, apparatus and military equipment, will be charged against him and the parent or guardian must assume responsibility for its return without abuse, to the proper department at the end of each scholastic year, at which time the account will be cancelled. If abused, the cost of replacing or repairing the abused article, must be paid by the parent or guardian.

Damage to College property in public places in the building and on the grounds by the students will be charged to the whole student body, pro rata, unless the offender is known. In such cases, the whole expense of repairing or replacing the damaged property will be charged to the parent or guardian of the offending party. The matriculation of a student is evidence of the acceptance of this regulation.

Coaching for backward students will be provided by the President upon application.

UNIFORM.*

Dress Uniform (coat, trousers and cap)	$15.60
Khaki Uniform (coat, trousers, hat and leggins)	5.50
Shirt and belt	1.25

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*Price quoted on basis of last year's contract.

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.
1 pair blankets (for single bed).
2 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (uniform).

The room-mates together purchase the following articles:

2 table cloths (uniform).
2 clothes bags (uniform).
1 broom.

All the articles marked (uniform) in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any excess will be returned promptly.

STUDENT ORGANIZATIONS.

Students' clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and college pride and developing an *esprit de corps* among the students. Each class has its own organization in which matters relating to the class are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline and tends to raise the standard of student honor.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

President, C. H. Harper.
Vice-President, E. I. Oswald.
Secretary, R. Brigham.
Treasurer, H. C. Byrd.

Much encouraging work has been done by this organization during the past year, and much interest has been shown in the meetings.

LITERARY SOCIETIES.

These societies are invaluable adjuncts to college work. Through them a good knowledge of parliamentary law is gained as well as a readiness of expression and activity in thought qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Instructor in Public Speaking, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

NEW MERCER SOCIETY.

President, A. N. Bowland.
Vice-President, C. H. Harper.
Secretary-Treasurer, U. W. Long.
Sergeant-at-Arms, B. R. Cooper.

MORRILL SOCIETY.

President, M. H. Adams.
Vice-President, E. S. Holloway.
Secretary-Treasurer, R. L. Capestany.
Sergeant-at-Arms, F. B. Frantz.

ROSSBURG CLUB.

President, A. N. Bowland.
Vice-President, H. D. Williar, Jr.
Secretary, F. E. Linnell.
Treasurer, G. W. Firor.

The social man is a necessity—hence this organization is encouraged and supported by the President and Faculty. Its entertainments have been marked by a spirit which emphasizes the wisdom of its continuance and encouragement.

"REVEILLE."

The "Reveille" is the College annual, edited entirely by the Senior class; it is the successor to the "Cadet Review.' Eleven editions of the "Reveille" have appeared and each has been characterized by a gratifying improvement in the standard both of originality and expression.

EDITORIAL STAFF, 1907.

Editor-in-Chief, W. T. Mahoney.
Associate Editors, M. A. Adams, C. H. Harper, S. T. Vocke.
Business Manager, G. W. Firor.
Associate Business Managers, J. P. Mudd, F. E. Linnell.
Treasurer, E. S. Holloway.

DEPARTMENT EDITORS.

Athletic, A. N. Bowland.
Humorous, H. D. Williar, Jr.
Rossburg Club, A. N. Bowland.
Class History, M. A. Hudson.

THE ORATORICAL ASSOCIATION OF MARYLAND COLLEGES.

The Maryland Agricultural College is a member of this Association which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges in rotation and a marked improvement is to be observed as a result of its organization.

INTERCOLLEGIATE DEBATE.

In 1904 an arrangement was made for an annual contest in debating between students representing Delaware College and the Maryland Agricultural College.

This contest has aroused much interest and enthusiasm, a marked improvement may be observed on the part of the participants from year to year.

THE ALUMNI ASSOCIATION.

"The Alumni Association is steadily growing in two ways; that is to say recent graduates almost invariably become active members, and the graduates of the earlier days of the College are becoming more active and more interested in all that pertains to the welfare of our Alma Mater.

The semi-centennial celebration, which occurred March 6, 1906, had for one of its results the bringing together of a larger gathering of the Alumni than on any previous occasion, and this re-union is probably the forerunner of larger Alumni gatherings in the future.

The association has continued the offer of three medals for worthy students in the several collegiate departments, and there is no doubt regarding the wisdom of stimulating in this way the energies of the students. The enrollment of the Alumni Association is now reaching a point where some definite accomplishment can be effected, and each individual should be ready to suggest a desirable project, at the same time to assist in the execution of that object which is most feasible and popular with the Association at large.

The entire institution as viewed from the Alumni standpoint is worthy of the confidence of its patrons and the public. Each of us should feel that every step in advance of that achieved in our day, should give us a feeling of pride, that it is in a manner the result of the successful completion of the work then offered and should bind us more closely to the work of the present and the broadening of its future.

The officers for the year are: President, W. S. Keech, '93; Vice-President, F. P. Veitch, '91; Secretary-Treasurer, E. F. Garner, '03; Executive Committee, members at large, S. H. Harding, '95, and J. E. Ray, '92.

Graduates and members of the association are requested to keep the Secretary-Treasurer, E. F. Garner, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates which will enable the officers to locate and communicate with them will facilitate their efforts and will tend to further the success of the Association."

An Alumnus.

DEGREES CONFERRED IN 1907.

MASTER OF SCIENCE.

ARTHUR B. GAHAN.

MASTER OF ARTS.

D'ARCY C. BARNETT.
GLENWORTH STURGIS.
LEMUEL FERDINAND ZERKEL.

BACHELOR OF SCIENCE IN HORTICULTURE.

GUY WISOTZKEY FIROR.
MARK ANTHONY HUDSON.

BACHELOR OF SCIENCE IN CHEMISTRY.

STANLEY TORNEY VOCKE.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

MORRIS HENRY ADAMS.
ROGELIO LILIO CAPESTANY.
HANNIBAL SANFORD HATTON.
HENRY HOWARD OWINGS.
HARRY DUGAN WILLIAR, JR.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

WILLIAM ALFRED NAIRNE BOWLAND.
CHARLES HAMILTON HARPER.
EDWIN SEABROOK HOLLOWAY.
FRANK ELIJAH LINNELL.
JOHN POSEY MUDD.

BACHELOR OF ARTS.

WILLIAM TERRY MAHONEY.

CERTIFICATES AWARDED IN TWO YEARS' COURSE IN AGRICULTURE.

GEORGE JAMESON.
ROBERT HENRY RUFFNER.
CLARENCE EARL STANTON.

MEDALS.

JOHN POSEY MUDD.

Senior Medal: for highest standing for the entire course; offered by the President. Average 92.5.

MORRIS HENRY ADAMS AND WILLIAM TERRY MAHONEY.

Honorary mention, average over 90.

J. P. SHAMBERGER.

Junior Medal: for highest standing in Junior Year; offered by the President. Average 97.4.

HARRY WOOD LIPPENCOTT.

*Gold Medal for best debater in commencement competition; offered by the Alumni Association.

STANLEY TORNEY VOCKE.

*Gold Medal for best Thesis on Agricultural Sciences; offered by the Alumni.

CHARLES HAMILTON HARPER.

*Gold Medal for best work in Mechanical Engineering Department; offered by the Alumni Association.

JOHN POSEY MUDD.

Honorable mention.

RALPH BRIGHAM.

Gold Medal for the best essay on "American Citizenship;" offered by the Board of Trustees.

HARRY WOOD LIPPENCOTT,

Schley Prize for best oration, treating Maryland History, delivered on Maryland Day, 1907; founded by Hon. B. H. Warner.

JAMES STANLEY GORSUCH,

William Pinkney Whyte Gold Medal; founded by Hon. Isaac Lobe Straus; for excellence in declamation, for members of Sophomore class.

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*Regulations governing competition for Alumni Medals: Competition for the medal for best thesis on Agricultural Science is open to members of the Senior Class and Second Year of the Two-Year Agricultural Courses; and two copies of the thesis must be deposited with the Chairman of the Science Section of the Faculty at least one week before Commencement day.

Rules governing the competition for medals for commencement debate and for best work in the Mechanical Engineering Department are provided by the departments of English and Public Speaking, and the Professor of Mechanical Engineering, respectively.

Competition is open to undergraduate students only.

MILITARY ROSTER—CADET BATTALION.

EDWARD LLOYD, MAJOR, U. S. A.

COMMANDANT OF CADETS.

FIELD AND STAFF.

Major, B. R. Cooper.
First Lieutenant and Adjutant, T. B. Mackall.
Second Lieutenant and Quartermaster, R. Brigham.

NON-COMMISSIONED STAFF.

Sergeant-Major, C. F. Mayer.
Quartermaster Sergeant, L. O. Jarrell.
Color Sergeant, P. E. Dupuy.

COMPANY A.

U. W. Long, Captain.
R. L. Silvester, First Lieutenant. W. C. Reeder, Second Lieutenant.
J. W. Firor, Third Lieutenant.
A. C. Turner, First Sergeant. J. Q. A. Holloway, Second Sergeant.
J. S. Gorsuch, Third Sergeant. W. R. Maslin, Fourth Sergeant.
H. W. Stinson, Fifth Sergeant.
H. E. Kries, First Corporal. L. J. Hathaway, Second Corporal.
F. J. Maxwell, Third Corporal. M. E. Tydings, Fourth Corporal.

COMPANY B.

J. P. Shamberger, Captain.
W. A. S. Somerville, First Lieutenant. N. L. Warren, Second Lieutenant.
G. G. Becker, Third Lieutenant.
P. E. Burroughs, First Sergeant. L. E. Gilbert, Second Sergeant.
T, D. Jarrell, Third Sergeant. W. H. H. Badenhoop, Fourth Serg't.
E. Plumacher, Fifth Sergeant.
Q. E. Hamilton, First Corporal. J. A. Martin, Second Corporal.
H. S. Cobey, Third Corporal. L. M. Roe, Fourth Corporal.

COMPANY C.

C. W. Sylvester, Captain.

H. B. Hoshall, First Lieutenant.	S. L. Lowrey, Second Lieutenant.

H. W. Lippencott, Third Lieutenant.

J. W. F. Allison, First Sergeant.	F. H. Dryden, Second Sergeant.
J. A. Crutchfield, Third Sergeant.	M. E. Choate, Fourth Sergeant.

C. W. Sigler, Fifth Sergeant.

W. J. Frere, First Corporal.	T. R. Stanton, Second Corporal.
E. H. Price, Third Corporal.	J. H. Hoge, Fourth Corporal.

ADDITIONAL THIRD LIEUTENANTS.

J. D. Darby.
E. M. Paradis.
H. C. Byrd.
M. Plumacher.
N. E. Brice.
R. A. Wilson.

ROSTER OF MATRICULATES.

SESSION 1906-1907.

GRADUATE STUDENTS.

	POST OFFICE.	COUNTY.
Barnett, D. C.	Cambridge	Dorchester
Gahan, A. B.	College Park	Prince George
Sturgis, G.	Snow Hill	Worcester
Zerkel, L. F.	Luray	*Virginia*

SENIOR CLASS.

Adams, M. H.	Princess Anne	Somerset
Blair, E. A.	Baltimore	Baltimore City
Bowland, A. N.	Kingston	Somerset
Capestany, R. L.	San Juan	*Porto Rico*
Cockey, A. D.	Owings Mills	Baltimore
Firor, G. W.	Thurmont	Frederick
Harper, C. H.	Baltimore	Baltimore City.
Hatton, H. S.	Piscataway	Prince George.
Holloway, E. S.	Rosaryville	Prince George.
Hudson, M. A.	Stockton	Worcester.
Linnell, F. E.	Falmouth	*Massachusetts.*
Mahoney, W. T.	Leeds	Cecil.
Mudd, J. P.	Washington	*District of Columbia*
Owings, H. H.	Simpsonville	Howard
Vocke, S. T.	Baltimore	Baltimore City
Williar, H. D. Jr.	Ruxton	Baltimore

JUNIOR CLASS.

Becker, G. G.	Baltimore	Baltimore City
Brice, N. E.	Annapolis	Anne Arundel
Brigham, R.	Brinklow	Montgomery
Broughton, L. B.	Pocomoke City	Worcester
Byrd, H. C.	Crisfield	Somerset
Byron, E. J.	Williamsport	Washington
Cooper, B. R.	Worton	Kent
Darby, J. D.	Bucklodge	Montgomery
Day, G. C.	Dublin	Harford
Firor, J. W.	Thurmont	Frederick
Griffin, J. P.	Highland	Howard
Hoshall, H. B.	Parkton	Baltimore
Lippencott, H. W.	Grafton	*West Virginia*
Long, U. W.	Selbyville	*Delaware*
Lowrey, S. L.	Rossville	Baltimore
Mackall, T. B.	Mackall	Calvert
Paradis, E. M.	Stockton	Worcester
Plumacher, E. H.	Maracaibo	*Venezuela*
Plumacher, M. C.	Maracaibo	*Venezuela*

Reeder, W. C.	Rising Sun	Cecil
Rumig, F. E.	College Park	Prince George
Shamberger, J. P.	Parkton	Baltimore
Silvester, R. L.	College Park	Prince George
Solari, C. S.	College Park	Prince George
Somerville, W. A. S.	Cumberland	Allegany
Stabler, A. L.	Brighton	Montgomery
Stinson, H. W.	Columbia	Howard
Sylvester, C. W.	Denton	Caroline
Thomas, W. H.	Cross Roads	Charles
Warren, N. L.	Selbyville	*Delaware*
Warthen, C. A.	Kensington	Montgomery
Wilson, R. A.	Cumberland	Allegany

SOPHOMORE CLASS.

Allen, R. S.	Rising Sun	Cecil
Allison, J. M. F.	Washington	*Dictrict of Columbia*
Badenhoop, H. W. H.	White Marsh	Baltimore
Baker, C. S.	Stevensville	Queen Anne
Boyle, W.	Brightwood	*District of Columbia*
Burgess, A. E.	Hyattsville	Prince George
Burroughs, P. E.	Croome	Prince George
Coster, H. M.	Solomons	Calvert
Crutchfield, J. A.	Baltimore	Baltimore City
Dryden, F. H.	Pocomoke City	Worcester
Dupuy, P. E.	Passamayo	*Peru*
England, W. R.	Washington	*District of Columbia*
Fluharty, W. B.	Greensboro	*North Carolina*
Gilbert, L. E.	Laurel	Prince George
Gorsuch, J. S.	Fork	Baltimore
Grason, J. P.	Towson	Baltimore
Haslup, J. E.	Savage	Howard
Hathaway, L. J.	Easton	Talbot
Hayden, O. M.	Maddox	St. Mary
Heyser, W. W.	Hagerstown	Washington
Holloway, J. Q. A.	Rosaryville	Prince George
Jarrell, L. O.	Greensboro	Caroline
Jarrell, T. D.	Greensboro	Caroline
Judd, R. A.	Washington	*District of Columbia*
Klopmeyer, C.	Norwood	Montgomery
Kries, H. E.	Baltimore	Baltimore City
McDonald, W. A.	Laurium	*Michigan*
McCeney, H. C.	Silver Spring	Montgomery
McEnany, R.	Clear Spring	Washington
Maslin, W. R.	Port Chester	*New York*
Mayer, C. F.	Frostburg	Allegany
Osbourne, W. E.	Baltimore	Baltimore City
Otis, H.	Baltimore	Baltimore City
Sayer, J. P.	Washington	*District of Columbia*
Schorr, J. E.	Baltimore	Baltimore City
Smith, B. K.	Alexandria	*Virginia*
Spalding, B. D.	Churchville	Harford
Stabler, S. S.	Brighton	Montgomery
True, L. G.	Washington	*District of Columbia*
Turner, A. C.	Sollers	Calvert
Walters, H. M.	Pocomoke City	Worcester
Whiting, W. W.	Hyattsville	Prince George

FRESHMAN CLASS.

Adler, H.	Washington	*District of Columbia*
Andrews, O. R.	Hurlock	Dorchester
Bailey, G.	Hyattsville	Prince George
Barrows, P.	Berwyn	Prince George
Beall, P.	Beltsville	Prince George
Bennett, V. W.	Frostburg	Allegany
Berry, R. B.	Laurel	Prince George
Bounds, E. H.	Mardella Springs	Wicomico
Brack, E.	Baltimore	Baltimore City
Breeden, A. C.	Sollers	Calvert
Brooks, T. R.	Hyattsville	Prince George
Canby, W. M.	Colesville	Montgomery
Cardona, M.	San Salvador	Honduras
Carpinter, R. H.	Washington	*District of Columbia*
Cobey, H. S.	Grayton	Charles
Crapster, J. O.	Taneytown	Carroll
Doak, H. D.	Philadelphia	*Pennsylvania*
Donaldson, J. L.	Berwyn	Prince George
Drach, C. R.	New Windsor	Carroll
Dudley, C. T.	Easton	Talbot
Evans, H. C.	Lonaconing	Allegany
Frere, W. J.	Tompkinsville	Charles
Gray, S. L.	Nanjemoy	Charles
Hamilton, G. E.	La Plata	Charles
Harrison, G.	Woodlawn	Baltimore
Hicks, C. G.	Cambridge	Dorchester
Hoen, S.	Baltimore	Baltimore City
Hoge, J. H.	Baltimore	Baltimore City
Hoopes, G. K.	Baltimore	Baltimore City
Lambden, S. P.	Pocomoke City	Worcester
Martin, J. A.	Fairfax	*Virginia*
Martinez S.	Salvador	*Honduras*
Maxwell, F. J.	Comus	Montgomery
Menendez, E.	Mayaguez	*Porto Rico*
Merceron, H. J.	Sykesville	Carroll
Morgan, F. L.	Washington	*District of Columbia*
Morley, S.	Hyattsville	Prince George
Morse, J. W.	Riverdale	Prince George
Price, E. H.	Washington	*District of Columbia*
Quimby, G. P.	Cordova	Talbot
Roberts, M.	Washington	*District of Columbia*
Roe, L. M.	Wye Mills	Talbot
Severe, W. E.	Riverdale	Prince George
Smith, W. C.	Baltimore	Baltimore City
Stanton, T. R.	Grantsville	Allegany
Swan, G. W.	Washington	*District of Columbia*
Timanus, W. O.	Laurel	Prince George
Tydings, M. E.	Havre de Grace	Harford
Ward, F. R.	Baltimore	Baltimore City
Waring, H. A.	Memphis	*Tennessee*
White, H. J.	College Park	Prince George
Wilson, M. D.	Finksburg	Carroll

SECOND YEAR AGRICULTURAL STUDENTS.

Frantz, F. B.	Smithburg	Washington
Gamero, A.	Honduras	*Honduras*

Jameson, G.	Hughesville	Charles
Ruffner, R. H.	Opal	*Virginia*
Stanton, C. E.	Grantsville	Garrett

FIRST YEAR AGRICULTURAL STUDENTS.

Brown, M. G.	Woodbine	*Pennsylvania*
Choate, M. E.	Randallstown	Baltimore
Golden, C. J.	Swanton	Garrett
Malaret, A. V.	San German	*Porto Rico*
McCeney, S. C.	Silver Spring	Montgomery
Pope, I. S.	Chevy Chase	Montgomery
Roelkey, D. H.	Knoxville	Frederick
Sigler, C. W.	Ridgely	Caroline
Smith, I. A.	Ashton	Montgomery

PREPARATORY STUDENTS

Aman, L. J.	Hyattsville	Prince George
Church, C. B.	Washington	*District of Columbia*
Daley, J.	Baltimore	Baltimore City
Devilbiss, H. R.	New Windsor	Carroll
Duckett, A. B.	Hyattsville	Prince George
Garey, D.	Baltimore	Baltimore City
Haynes, W. G.	Cotton Hill	*West Virginia*
Hodgkin, F. H.	Washington	*District of Columbia*
Hoen, R.	Baltimore	Baltimore City
Hoffman, V.	Washington	*District of Columbia*
Lunn, C. B.	Baltimore	Baltimore City
McCeney, G. W.	Silver Spring	Montgomery
Michael, C. W.	Washington	*District of Columbia*
Morris, J. H.	Greensboro	*North Carolina*
Newman, L. C.	Washington	*District of Columbia*
Pearre, E.	Unionville	Carroll
Roder, L.	Baltimore	Baltimore City
Shipley, W. L.	Berwyn	Prince George
Stifler, R. J.	Belair	Harford
Thomas, R. D.	Pomonkey	Charles
Trimble, V.	Mt. Savage	Allegany
Twadell, C. E.	Philadelphia	*Pennsylvania*
White, W. H.	College Park	Prince George

SPECIAL STUDENTS.

Darling, Flora I.	Washington	*District of Columbia*
Oswald, E. I.	Chewsville	Washington

STUDENTS IN TEN-WEEK WINTER COURSE.

Cairnes, W. H.	Jarrettsville	Harford
Cohill, J. A.	Hancock	Washington
Collier, C. S.	Easton	Talbot
Englehart, A. C.	Accident	Garrett
Hayden, N.	Leonardtown	St. Mary
Williams, W. W.	Alpha	Howard

STUDENTS IN INSPECTORS COURSE.

Aronson, J. E.	Easton	Talbot
Barnhardt, D. H.	Denton	Caroline
Drury, C. O.	Chaney	Calvert
Hanson, A. L.	McConchie	Charles
Hardt, J. T.	Elioak	Howard
Nelson, A. B.	Laurel	Prince George
Riley, H.	Denton	Caroline
Walls, E. P.	Barclay	Queen Anne
Wathen, G. F.	Loveville	St. Mary

STUDENTS IN SPECIAL TWO-WEEK COURSE.

Prize-Winners In Farmers' Institute Corn-Judging Contest.

Armessen, H.	Cambridge	Dorchester
Bradley, A. B.	Salisbury	Wicomico
Baker, E. S.	Chewsville	Washington
Gray, J. H.	Mutual	Calvert
Gertner, P. F.	Oakland	Garrett
Lynch, F.	Ridgely	Caroline
Leeke, G. P.	Calvert	Cecil
Morris, E. R.	Worton	Kent
Muessen, J. W.	Mitchellsville	Prince George
Oswald, D. P.	Chewsville	Washington
Radebaugh, G. D.	Bynum	Harford
Sellman, J.	South River	Anne Arundel
Tucker, W. L.	Forest Hill	Harford
Wilson, J. M.	Bier	Allegany
Yingling, C. L.	Pleasant Valley	Carroll

SUMMARY OF STUDENTS.

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Sophomore Class	42
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Second Year Agricultural	5
First Year Agricultural	9
Preparatory Students	23
Ten-week Course	6
Special Students	2
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Corn Special	15
Total	215

LIST OF PRESIDENTS AT THE MARYLAND AGRICULTURAL COLLEGE.

1.	Prof. Benjamin Hallowell,	President of the Faculty	1859—1860
2.	Rev. J. W. Scott	“ “ “ “	1860—1860
3.	Prof. Colby	“ “ “ “	1860—1861
4.	Prof. Henry Onderdonk	“ “ “ “	1861—1864
5.	Prof. N. B. Worthington	“ “ “ “	1864—1867
6.	Prof. C. L. C. Minor,	President of College	1867—1868
7.	Admiral Franklin Buchanan	“ “ “ “	1868—1869
8.	Prof. Samuel Regester	“ “ “ “	1869—1873
9.	Gen. Samuel Jones	“ “ “ “	1873—1875
10.	Capt. W. H. Parker	“ “ “ “	1875—1883
11.	Gen. Augustus Smith	“ “ “ “	1883—1887
12.	Allen Dodge, Esq., Pro Tem.	“ “ “ “	1887—1888
13.	Major Henry E. Alvord	“ “ “ “	1888—1892
14.	Capt. R. W. Silvester	“ “ “ “	1892———

LIST OF GRADUATES, WITH DEGREES AND ADDRESSES.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

CLASS OF '63.

Calvert, C. B., A. B., College Park, Md.
Sands, W. B., A. B., Lake Roland, Md.

CLASS OF '64.

Franklin, J., A. B., 306 San Pedro Ave., San Antonio, Texas.
Todd, W. B., B. S.

CLASS OF '66.

Hall, E., A. B., Millersville, Md.
*Roberts, L., Ph. B.

CLASS OF '71.

Soper, F. A., A. B. (M. A. '74), Baltimore, Md.

CLASS OF '73.

*Henry, R. S., A. B. (M. A. '75).
Miller, O., A. B. (M. A. '75).
Regester, A., A. B.
Waters, W. F., A. B., West River, Md.
Worthington, D., A. B.
Worthington, W., A. B.

---

*Deceased.

CLASS OF '74.

Coffren, J. H., A. B. (M. A. '77).
Davis, H. M., A. B. (M. A. '77), Poolesville, Md.
Griffith, L. A., A. B. (M. A. '77), Upper Marlboro, Md.
Hall, D., M. A.
Norwood, F. C., A. B. (M. A. '77), Frederick, Md.

CLASS OF '75.

Gray, J. B., A. B., Prince Frederick, Md.
Hyde, J. F. B., A. B., 110-114 Hanover Street, Baltimore, Md.
Lerch, C. E., B. S., 110-114 Hanover Street, Baltimore, Md.
Miller, L., B. S., Albuquerque, New Mexico.

CLASS OF '76.

Blair, W. J., B. S. (M. S.), Custom House, Baltimore, Md.
Thomas, T. H., B. S., Maddox, Md.
*Worthington, J. L., B. S.

CLASS OF '77.

*Beall, R. R., B. S.
Emack, E. G., B. S., District Building, Washington, D. C.
*Thomas, G., B. S.
Truxton, S., B. S.

CLASS OF '78.

Thomas, W., B. S.

CLASS OF '80.

Houston, T. T., A. B.
Rapley, R. R., B. S.

CLASS OF '81.

Gale, Henry E., A. B., 260 W. Hoffman St., Baltimore, Md.
Mercer, R. S., A. B., New York, N. Y.
Porter, W. R., A. B., R. B. Porter & Sons, S. Charles St., Baltimore, Md.
Thomas, W. H., A. B., Westminster, Md.
Wood, C. W., A. B.

CLASS OF '82.

Bowen, P. A., Jr., A. B., 1410 G St., N. W., Washington, D. C.
Saunders, C. A., A. B.
Stonestreet, J. H., A. B., Barnesville, Md.

CLASS OF '83.

Chew, R. B. B., A. B., 512 F St., N. W., Washington, D. C.
Freeland, H., A. B., Mutual, Calvert Co., Md.
Lakin, W. A., A. B., Talbot County, Md .
Rapley, E. E., A. B., 628 Louisiana Ave., Washington, D. C.

CLASS OF '84.

Martin, F., B. S., Montgomery County, Md.
Lakin, W. T., B. Ag ,

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*Deceased.

CLASS OF '88.

Chambliss, S. M., A. B., Times Building, Chattanooga, Tenn.
Hazen, M. C., B. S., District Building, Washington, D. C.
Johnson, L. B., A. B., Morganza, Md.
*Sigler, W. A., B. S.
Smith,, R. E., B. S., Ridgely, Md.
Tolson, A. C., A. B., Daily Record Building, Baltimore, Md.
Weems, J. B., B. S., Carew, Va.

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Soles, C. E., B. S., McKeesport, Pa.

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*Branch, C., B. S.
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*Penn, S., B. S.
Veitch, F. P., B. S., Agricultural Department, Washington, D. C.

CLASS OF '92.

Besley, F. W., A. B., Johns Hopkins University.
Brooks, J. D., A. B., Medical Department, U. S. A.
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Ray, J. E., A. B., 406 Fifth St., Washington, D. C.

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Bomberger, F. B., B. S. (M. A. '02), College Park, Md.
Brown, A. S., B. S., Washington, D. C.

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*Deceased.

Cairnes, C. W., B. S., United States Revenue Cutter Service.
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Whiteford, G. H., B. S., Millersville, Md.

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*Deceased.

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Hardisty, J. T., A. B., Collington, Md.
McDonnell, F. V., M. E., 1613 Commerce St., Wellsville, Ohio.
Whiteford, H. C., B. S., Whiteford, Md.

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*Deceased.

CLASS OF '02.

Bowman, J. D., M. E., Rockville, Md.
Couden, J., B. S., Perryville, Md.
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Fendall, W. S., M. E., Saranac Lake, N. Y.
Hirst, A. R., B. S., Maryland Geological Survey, Baltimore, Md.
*Lansdale, H. N., B. S.
Mitchell, R. L., B. S., La Plata, Md.
Mackall, L. E., A. B., 715 West Fayette St., Baltimore, Md.
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*Wisner, J. I., B. S., Baltimore, Md.

CLASS OF '03.

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Gray, J. P., B. S., New Haven, Conn.
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Sasscer, E. R., B. S., Department of Agriculture, Washington, D. C.
Shaw, S. B., B. S., Parkersburg, W. Va.
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Wentworth, G. L., M. E., N. Y. C. R. R., New York.

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Byron, W. H., B. S., Williamsport, Md.
Digges, E. D., B. S., Maryland Geological Survey, Baltimore, Md.
Duckett, M., B. S., Hyattsville, Md.
Hayman, E. T., B. S., Stockton, Md.
Krentzlin, J. J. A., B. S., Maryland Geological Survey, Baltimore, Md.
Mackall, J. N., B. S., Maryland Geological Survey, Baltimore, Md.
Nicholls, R. D., B. S., Germantown, Md.
Parker, A. A., B. S., Baltimore, Md.
Smith, W. T., B. S., Ridgely, Md.
Snavely, E. H., B. S., Grange, Md.
Somerville, J. W., B. S., Hyattsville, Md.
Sturgis, G., B. A., Charlotte Hall, Md.
White, W., B. S., Dickerson, Md.

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*Deceased.

CLASS OF '96.

Bassett, L., B. S., Myersdale, Pa.
Caul, H. J., B. S., San Juan, P. R.
Dixon, R. H., B. S., Maryland Geological Survey, Baltimore, Md.
Graham, J. J. T., B. S., College Park, Md.
Mayer, G. M., B. S., Box 134, Ambridge, Pa.
McNutt, A. M., B. S., Berkley, Md.
Mitchell, J. W., B. S., Brookline, Mass.
Showell, J. L., B. S., Berlin, Md.
Ridgway, C. S., B. S., Johns Hopkins University, Baltimore, Md.
Thomas, S. P., B. S., Sandy Spring, Md.
Waters, F. R. B., B. S., Seat Pleasant, Md.
Zerkel, L. F., B. A., Winchester, Va.

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Maryland Agricultural College Bulletin.

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Catalogue 1908-09.

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he Maryland Agricultural College

1858

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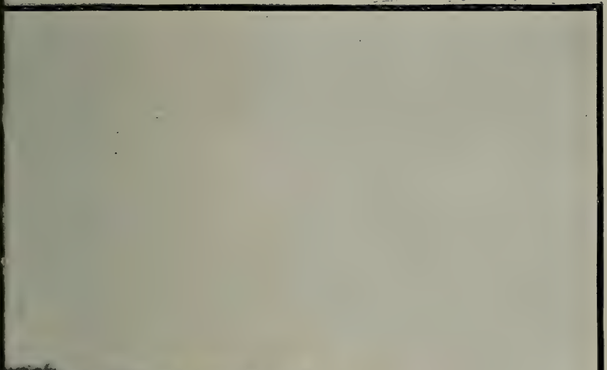
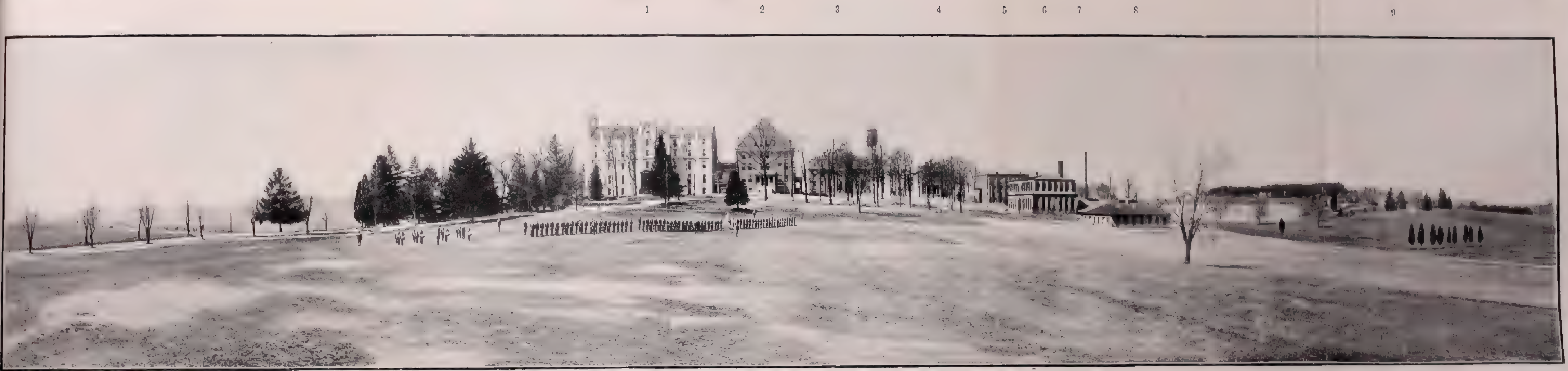


5—Chemical Department '97.
6—Mechanical Department '94.
7—Heating and Electric Plant '96, '04.
8—Forge Room and Foundry '04.
9—President's Home.



VIEW OF COLLEGE BARRACKS, AND LABORATORIES AND CAMPUS.

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2—Dormitory and Administration '04.
3—Morrill Hall '98.
4—Gymnasium and Library '92.
5—Chemical Department '97.
6—Mechanical Department '94.
7—Heating and Electric Plant '96, '04.
8—Forge Room and Foundry '04.
9—President's Home.

THE

MARYLAND AGRICULTURAL COLLEGE

COLLEGE PARK, MARYLAND

1856 1908

CATALOGUE

1908-9

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1908-09

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*Died February 11, 1908.

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W. R. EASTMAN, B. S.,
Assistant in Vegetable Pathology and Botany.

L. M. PEAIRS, B. S.,
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Stenographer.

MRS. L. K. FITZHUGH,
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Executive Clerk.

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*Died January 20, 1908.
†Appointed February 20, 1908.

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STUDENT PUBLICATIONS: Messrs. Bomberger (Chairman), Norton.

CALENDAR.

1908.

THIRD TERM.

Monday, March 16th—Third Term Begins.
Wednesday, April 15th, noon, to Tuesday, April 21st, 1 P. M.—Easter Recess.
Thursday, May 15th—Submitting of Theses.
Sunday, June 7th—Baccalaureate Sermon.
Monday, June 8th—Class Day.
Tuesday, June 9th—Alumni Day.
Wednesday, June 10th, 11 A. M.—Commencement Day Exercises.

1908-1909.

FIRST TERM.

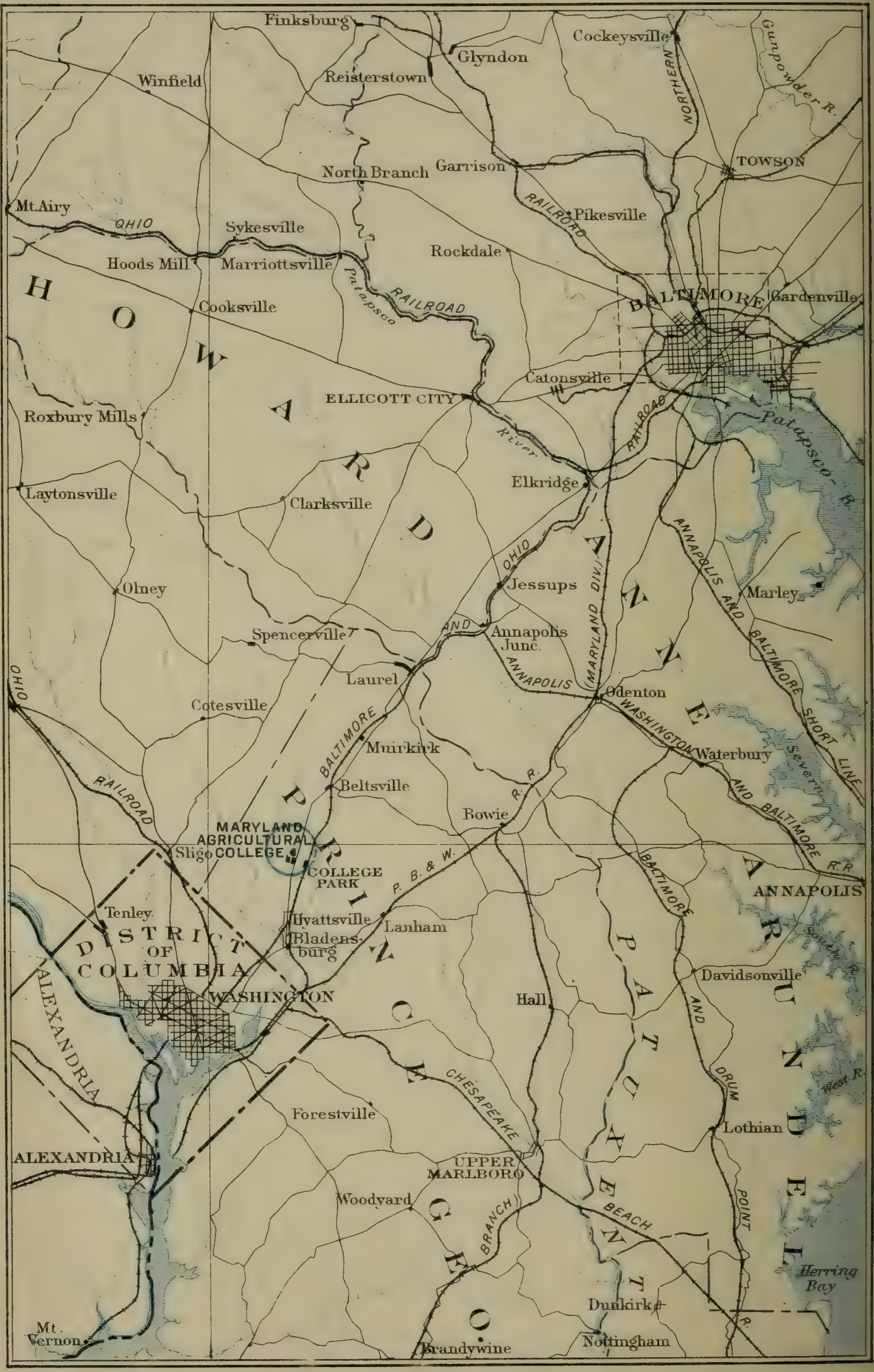
Tuesday, September 15th, and Wednesday, September 16th—Entrance Examinations.
Thursday, September 17th, 1 P. M.—College Work Begins.
Friday, December 18th, noon—First Term Ends.
Friday, December 18th, noon, to Monday, January 4th, noon—Christmas Recess.

SECOND TERM.

Monday, January 4th, noon—Second Term Begins.
Tuesday, January 5th—Special Winter Course in Agriculture Begins.
Monday, February 1st—Filing Subjects of Theses.
Friday, March 19th—Second Term and Special Winter Course in Agriculture End.

THIRD TERM.

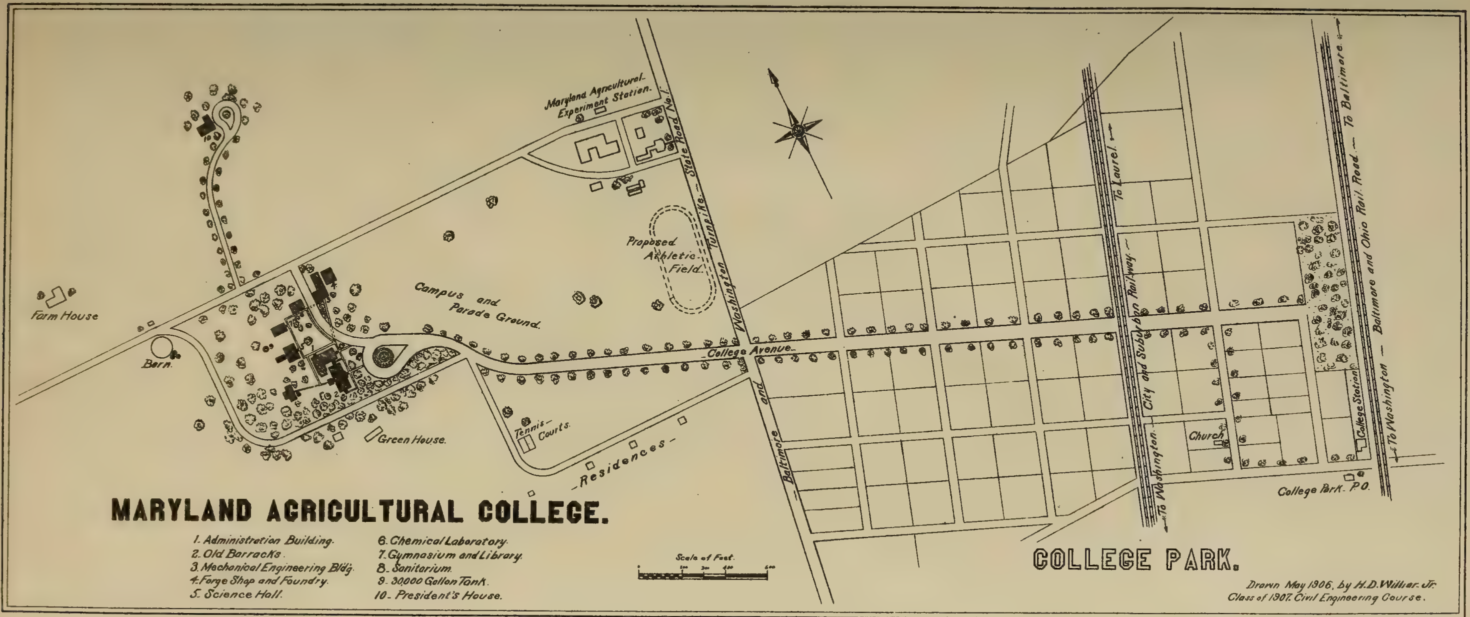
Monday, March 22nd—Third Term Begins.
Wednesday, April 7th, noon, to Tuesday, April 13th, 1 P. M.—Easter Recess.
Monday, May 17th—Submitting of Theses.
Sunday, June 13th—Baccalaureate Sermon.
Monday, June 14th—Class Day.
Tuesday, June 15th—Alumni Day.
Wednesday, June 16th, 11 A. M.—Commencement Day Exercises.



MAP SHOWING LOCATION OF

MARYLAND AGRICULTURAL COLLEGE.

A. Hoen & Co. Baltimore



MARYLAND AGRICULTURAL COLLEGE.

1. Administration Building.
2. Old Barracks.
3. Mechanical Engineering Bld'g.
4. Forge Shop and Foundry.
5. Science Hall.
6. Chemical Laboratory.
7. Gymnasium and Library.
8. Sanitarium.
9. 30,000 Gallon Tank.
10. President's House.

COLLEGE PARK.

Drawn May 1906, by H.D. Willar. Jr.
Class of 1907. Civil Engineering Course.

Farm House
Barn.
Green House.
Maryland Agricultural Experiment Station.
Campus and Parade Ground.
Proposed Athletic Field.
Tennis-Courts.
-Residences-
College Avenue.
Baltimore and Washington Turnpike.—State Road No. 1.
Scale of Feet.
0
200
300
400
600
To Laurel.
City and Suburban Railway.
To Washington.
Church
College Station
College Park. P.O.
To Washington — Baltimore and Ohio Rail Road.— To Baltimore

A. Hoen & Co. Baltimore

MARYLAND AGRICULTURAL COLLEGE.

HISTORY.

An act to establish and endow an agricultural college in the State of Maryland was passed by the legislature of the State in 1856 (see Laws of Maryland 1856, Chapter 97). At that time no other institution of a similar character existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original College building was erected, and its doors were opened to students in the fall of 1859.

For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land Grant Act." This Act granted each State and Territory which should claim its benefit a proportionate amount of unclaimed Western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the establishment and maintenance of at least one college in which the "leading object" should be, "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States" might "respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part, at least, a State institution, and such it is at the present time.

In 1892 the Federal Government passed a second act for the benefit of the agricultural and mechanical colleges. By the act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 should be reached, was granted each State, to be applied to the further equipment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

In 1887 the Federal Congress passed an important act in aid of the agricultural interests, appropriating $15,000 a year in each State and Territory for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

In 1906 Congress passed the Adams Bill, a measure of further assistance for the experiment stations of the several States. By this act there is granted a gradual increasing appropriation for the experimental work of the stations, until such grant shall equal $15,000 per annum.

During the last twelve years the College has made a steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory, the mechanical engineering building, Morrill Hall, the college barn, the sanitarium and the new administration building and barracks, as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Horticulture, Entomology and Vegetable Pathology, and of Chemistry (Fertilizer and Feed Control). Under such favorable auspices the institution has continued to grow, and has become the most important factor in the agricultural and industrial development of the State.

The State Bureau of Forestry, recently created, cooperates with the College, the Director being, by the terms of his appointment, Lecturer on Forestry at the Agricultural College.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least nine trains a day from each city stop at College Station, thus making the place easily accessible from all parts of the State. Hyattsville is the telegraph station. Telephone connection is made with the Chesapeake and Potomac lines.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway. The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres, and is devoted to gardens, orchards, vineyard, poultry yards, etc., all used for experimental purposes.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

COLLEGE BUILDINGS.

The original barracks is a five-story brick building, containing the student quarters and the Domestic Department. The dormitories are large, well ventilated and provided with fire escapes, bath and water rooms. All the buildings are lighted by gas and electricity and heated by steam from the central plant on the College grounds.

In 1894 the building used as the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is on the second floor, and is large, well-lighted and convenient for the purpose.

The Mechanical Engineering Department is located in a two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex, designed to afford additional facilities in forging and foundry work, which was erected and equipped during 1904. It is a model building of its kind.

The chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned by an Act of the General Assembly to the Professor of Chemistry at this College, who is thus the State Chemist.

Another addition to the group of College buildings is Morrill Hall, erected in 1898. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments had suffered, and greatly extending their opportunities for the development of high-grade scientific work. A greenhouse for work in entomology and vegetable pathology was erected in 1904.

The College Sanitarium, completed in 1901, has proved a most efficient means of isolating infectious disease which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished with modern hospital facilities. An experienced nurse is in constant attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated and equipment secured.

Among recent improvements are the dormitories, accommodating twice the number of students, an auditorium and offices in the Administration Building, added in 1904; a complete renovation of the original College barracks; a modern steam heating plant; gas and electric lighting; lavatories; forced ventilation, etc., all of which furnish quarters and class-rooms with unusually good sanitary arrangements.

Under the provisions of the acts of the last State Legislature a modern steam laundry has been added to the equipment, and other needed improvements will be secured as required.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture, and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of general culture. The purpose of this college is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of disbursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year, his work consists wholly of a few closely connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical work-shops a student is able to become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS OF THE COLLEGE.

- Agriculture—
  - Agronomy.
  - Animal Husbandry.
- Botany and Vegetable Pathology.
- Chemistry.
- Civil Engineering.
- Electrical Engineering and Physics.
- English and Civics.
- Entomology and Zoology.
- Horticulture—
  - Horticulture.
  - Forestry.
- Languages.
- Mathematics.
- Mechanical Engineering.
- Military Science.
- Oratory.
- Physical Culture.
- Preparatory.
- Veterinary Science.

The following pages give, under the several departments, the general character of the courses offered by each, and the main features of their equipment.

DEPARTMENT OF AGRICULTURE.

W. T. L. TALIAFERRO, PROFESSOR.

B. E. PORTER, ASSISTANT PROFESSOR.

The Agricultural Department offers three courses:

I. A four-year course leading to the degree of B. S.

II. A two-year course, for proficiency in which a certificate is awarded.

III. A ten-week winter course, for which credit is given toward the two-year or four-year course.

Education is transforming the farms into veritable workshops, whose products, in the aggregate, more than equal those of any other industry of the country, and under the influence of more general intelligence are capable of indefinite extension. In this work there is need of the trained investigator to discover the natural laws which underlie the phenomena of plant and animal life, and there is also need of educated farmers with skill and intelligence to receive these principles and apply them in practical farming.

These courses are so arranged as to furnish a good foundation upon which the student may build a successful career as a farmer, or develop into a specialist along some line pertaining to the farming industry. The studies to be pursued are recognized as being necessary to fully equip the student for the highest order of work, and for the greatest usefulness.

The College farm consists of two hundred and sixty-five acres of land, which is operated by the Maryland Experiment Station. Students of the agricultural course are made acquainted with the work of the Station from time to time, and because of the College and Station's close association an excellent opportunity is afforded the student to study the cultivation and growing of crops, the application of manures and fertilizers, the care of stock, the selection of seed from growing crops, the judging of the several classes of animals, and all the work of the practical farmer.

LECTURE COURSE.

This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers cannot fail to produce an excellent effect not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Students taking the Agricultural, Horticultural, Chemical or General Science courses are required to attend these lectures. With other students, attendance is optional.

DIVISION OF AGRONOMY.

The division of Agronomy takes up the agricultural work pertaining to the field and its crops. A number of courses are offered. These treat of farm crops, their classification, adaptation to soil and climate and methods of culture; soils, their properties, and how to care for them and make them more productive and fertile by crop rotation, and by the application of manures and fertilizers; farm management, how to make the farm a source of pleasure and profit by employing economic business principles and practices; farm machinery, the kind of tools to use for preparing the land, cultivating and harvesting the crops. A new soil laboratory has been added to this department. In this laboratory the student has an excellent opportunity to study the physical properties of the different kinds of soil. A separate desk and ample apparatus is provided each student to perform experiments for himself.

COURSES OFFERED.

I. Farm Crops. In this course the production of farm crops is considered in detail as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation and harvesting. A special feature is the study of crop improvement by breeding and selection. Very much of this work is of a practical nature in the laboratory or on the farm.

In order to make this a more practical course it is divided into two parts, the first part being given in the spring term and the latter part in the fall term. This division enables the student to take up the various phases of the work in their appropriate seasons.

The texts used are Morrow and Hunt's "Soils and Crops," Shaw's "The Cereals In America," Shamel's "Corn Judging."

Sophomore Year, Third Term; three theoretical and four practical periods per week. Junior Year, Second Term; two theoretical and two practical periods per week; Third Term, two theoretical and four practical periods per week.

II. SOILS. The study of the physical and chemical conditions of the soil in their relation to profitable agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text-books, laboratory and field work. No State in the Union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

A well equipped soil laboratory and the wide variety of soils found on the College farm offer exceptional advantages in the theoretical and practical study of this important subject.

The text-book used is "The Soil," by King.

Junior Year, First Term; 2 theoretical and 2 practical periods per week; first half, Third Term; 3 theoretical and 4 practical periods per week.

III. FARM DRAINAGE. Practical work in open ditching and under drains is provided for the students, on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

The text-book used in this course is Waring's "Drainage for Profit and Health."

Junior Year, Third Term; 2 theoretical and 2 practical periods per week.

IV. PLANT PRODUCTION. This course is intended for those students only who are specializing in agronomy. It consists of field and laboratory work in the study of the handling of fall sown and fall harvested crops. Great attention is given in this course to a careful note-taking and study of the results obtained in breeding work in corn and other fall maturing crops on the Experiment Station farm.

Senior Year, First Term; 3 theoretical and 4 practical periods per week.

V. FERTILIZERS. Of vital interest to the eastern and southern farmer of the present day, is the fertilizer question. Between it and the profit and loss account is a very close connection, and frequently a lack of knowledge of the subject entails upon the farmer both the loss of money paid and of the possible increase of the crop. In this course the subject is developed logically from the needs of the plant and the efficiency of the soil to the selecting of the proper plant foods for each crop under varying conditions of soil and climate. Special attention is given to the home mixing of fertilizers.

Senior Year, Second Term; 3 theoretical and 4 practical periods per week.

VI. FARM MACHINERY. Lectures and practical work.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. FARM MANAGEMENT. Lectures.

Senior Year, Third Term; 2 periods per week.

VIII. ADVANCED WORK IN CROP PRODUCTION.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

IX. ADVANCED WORK IN SOILS. Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

X. THESIS AND RESEARCH WORK. To be arranged for with the head of the department.

Senior Year, Second and Third Terms; 2 theoretical and 4 practical periods per week.

GEOLOGY.

I. Attention is given chiefly to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions.

Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference.

Freshman Year, First Term; 4 periods per week; Second Term; five periods per week.

DIVISION OF ANIMAL HUSBANDRY.

The division of Animal Husbandry stands for all lines of work which pertain to the judging, selecting, breeding, feeding, development, care and management of the various breeds and classes of domesticated animals. Good herds of stock are being established at the Maryland Agricultural Experiment Station which are of use to the student in his studies. In addition to the supply of stock on the farm the proximity of the College to Washington, Baltimore and the Government Quarantine Station, near Baltimore, makes it possible for the student to get excellent material for study. The Heurich dairy farm, close by, furnishes an excellent example in dairy farming. It is quite evident that there is but one way to make a young man a proficient judge of livestock, and that is by training the eye. In all of the lecture and laboratory work outlined in the courses the work is demonstrated with living specimens.

New dairy barns are erected at the Experiment Station. These are models of sanitation. A class-room for judging live stock is being planned for occupancy in the near future.

A growing library of herd-books is available to the student of pedigrees. These books give a fund of information concerning heredity, fecundity, and other breed characteristics.

COURSES OFFERED.

I. Breeds and Scoring. This course is devoted to the detailed study of the breeds of live stock. The practical work commences with a study of the animal form by the use of the score-card. Especial attention is given to the relation of form to function. First, the productive types are firmly fixed in the student's mind; then he takes up more particularly breed characteristics. Judging occupies two double periods two afternoons per week.

Text-books in use are "Types and Breeds of Farm Animals," by Plumb, and "Judging Live Stock," by Craig.

Junior Year, First Term; 3 theoretical and 4 practical periods per week.

II. Principles of Breeding. This course takes up the principles of breeding, including selection, heredity, atavism, variation, fecundity, in-and-in breeding, cross breeding and a historical study of their results.

Text-book: "Stock Breeding," Miles.

Junior Year, First Term; 3 theoretical periods per week.

III. Livestock Management. Lectures are given on the housing, feeding, care and management of dairy cattle, hogs and horses (Second Term). The housing, feeding, care and management of beef cattle and sheep (Third Term). The practical work in the spring term consists of applications of the work in the lectures, and takes up the drawing of barn plans and other stable conveniences.

Junior Year, Second Term; 2 theoretical periods per week; Third Term; 2 theoretical and 2 practical periods per week.

IV. Dairying. Text-books: Wing's "Milk and Its Production," Russell's "Dairy Bacteriology."

Junior Year, Third Term; 3 theoretical and 4 practical periods per week.

V. Stock Judging. Special attention is paid to the judging of groups of animals, similar to county and state fair work.

Senior Year, First Term; 4 practical periods per week.

VI. Herdbook. The herdbooks of the breeds of live stock are studied with a view of becoming acquainted with the pedigrees of the leading families of live stock, and the methods of recording the same. Here advanced work in animal breeding is taken up.

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VII. Animal Nutrition. This course embraces the principles and practice of animal feeding. After covering the principles of nutrition, it takes up the composition of feeding stuffs, their combination into properly balanced rations, and the relation between the sustenance of animals and their products. Students entering this course should have completed courses in Organic Chemistry and Comparative Anatomy and Physiology.

Text-books: "Feeds and Feeding," Henry; "Feeding of Animals," Jordan.

Senior Year, Second Term; 4 theoretical periods per week. Third Term; 4 theoretical and 4 practical periods per week.

VIII. Profitable Stock Feeding. This course treats of the feeding of animals in a most practical manner. Special attention is given to the feeding of breeding stock and the fattening of animals for market. There is no special requirement to enter this course, as in Course VII.

Text-book: "Profitable Stock Feeding," by H. R. Smith.

Two-year Short Course students, Second Term of Second Year; 4 theoretical periods per week.

IX. Research Work. Upon lines and subjects to be arranged with the department.

The object of this work is to develop independence and originality in the student, and also to give him a taste for personal investigation upon lines which are of particular interest to himself.

Junior Year, Third Term; 2 practical periods per week.

X. Thesis and Research. The investigations already begun in the Junior Year may be pursued throughout the Senior Year. Other work is to be taken up, and may furnish a basis for the thesis. The time given this work will be arranged with the department.

DEPARTMENT OF BOTANY AND VEGETABLE PATHOLOGY.

J. B. S. NORTON, PROFESSOR.

W. R. EASTMAN, ASSISTANT.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization, and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture; for since plants are the subjects dealt with in the field and garden, the study of plant life must be one of the fundamental sciences upon which such work is based. In addition to the courses in pure Botany, others of special economic trend are given. These are especially for students in the Agricultural and Horticultural courses, and take up such botanical studies of cultivated plants, plant diseases, etc., as may be useful in practical life to the professional farmer or gardener.

The equipment and means for illustration and demonstration, consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting miscroscopes, preserved specimens for illustration, a representative collection of Maryland plants; microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Advanced students have opportunity to observe the work being done in the laboratory of Vegetable Pathology and greenhouse of the State Horticultural Department, and, if competent, to assist in the same. Special attention is given to students who wish practice in the treatment of plant diseases, as it is the desire of the Department to encourage young men to engage in this work as a business.

I. General Principles. An elementary course in the general principles of anatomy, morphology and physiology of the higher plants. The structure and types of seed, root, stem, leaves, flower and fruit are studied in the laboratory, with a brief consideration of the functions of the different plant organs, a more complete course in plant physiology (III) being given later. This course is a necessary preparation for Course II.

Bergen and Davis' "Principles of Botany" is the principal textbook used.

Freshman Year, Second Term; 2 theoretical and 4 practical periods per week.

II. SYSTEMATIC BOTANY AND ECOLOGY. Principally field work with the manual on the native flora, and designed to give a knowledge of the names of the common Maryland plants and their position in the classification of the vegetable kingdom. The ecology of the plants examined in the field is also taken up, considering their relation to soils, water supply, light and other factors in their environment, cross pollination, dissemination of seeds, plant societies, etc. Each student makes a collection of at least fifty plants from some part of the State.

Reference books used: Gray's "Field, Forest and Garden Botany," Britton's "Manual," Gray's "Manual," Britton and Brown's "Illustrated Flora."

Freshman Year, Third Term; 2 theoretical and 4 practical periods per week.

A combination of I and II is given in the First Term of the two-year course in Horticulture, and in the Third Term of the two-year course in Agriculture.

III. PLANT PHYSIOLOGY. Lectures and experiments on the life processes of plants; absorption and transfer of water and food materials, photosynthesis, respiration, growth, movement, reproduction, etc., with microscopic studies of the structure of the organs concerned.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

IV. PLANT HISTOLOGY. Laboratory work with the compound microscope, studying the minute structure of the tissues and organs of the various types of plants. Each student prepares a series of sections for study with the microscope, from which he makes a set of outline drawings.

Steven's "Plant Anatomy" and Chamberlain's "Methods in Plant Histology" are the principal books used.

Junior Year, Second Term; 8 practical periods per week.

V. COMPARATIVE MORPHOLOGY AND CLASSIFICATION. A comparative study of the structure and life history of the principal types of plants from the lowest to the highest. The exercises consist principally of lectures and microscopic studies in the laboratory.

Text-book: Bergen and Davis' "Principles of Botany," Part II. The outline of classification of Engler's Syllabus is followed in general.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week; given also in abridged form in First Term.

VI. ECONOMIC PLANTS. Lectures on the names, classification, nativity and uses of the useful and detrimental plants of the world, with field and laboratory studies of the common cultivated plants; given with a view of enabling the student of horticulture or agriculture to know the scientific names and relationship of the plants with which he comes in contact in his chosen work.

Reference works: Bailey's Gray's "Field, Forest and Garden Botany," Bailey's "Encyclopedia of Horticulture," etc.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. MYCOLOGY. Lectures and laboratory work upon the common forms of fungi, with special reference to enabling the student to recognize those causing plant diseases; and preparatory to VIII.

Text-book: Underwood's "Molds, Mildews and Mushrooms."

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VIII. VEGETABLE PATHOLOGY. The causes, symptoms and means of control of plant diseases are studied by means of lectures, microscopic work in the laboratory and experiments in infection and treatment in field and greenhouse.

In addition to the lectures numerous reference books are used.

Senior Year, Second Term; 2 theoretical and 4 practical periods per week.

IX. RESEARCH. Students selecting Botany as a major in the Senior Year devote one term to a completion of an original study of some botanical subject upon which they prepare their graduation thesis.

Senior Year, Third Term; not less than the equivalent of 10 theoretical periods per week.

X. Elective courses for students of the General Science Course, or for post-graduate students, are offered in Methods in Plant Pathology, Botanical Microchemistry, Histology of Trees, Seed Testing, Taxonomy or advanced work in any of the undergraduate courses before mentioned.

General Science students in Botany pursue their elective courses in the first and second terms of the Senior Year for not less than the equivalent of 10 theoretical periods per week, and those pursuing Entomology as a major devote the equivalent of 3 theoretical periods per week throughout the year to Botany.

DEPARTMENT OF CHEMISTRY.

DR. H. B. MCDONNELL, PROFESSOR AND STATE CHEMIST.

JEROME J. MORGAN, ASSISTANT PROFESSOR.

R. C. WILEY, G. H. HARDIN, ASSISTANTS IN STATE WORK.

This department is charged with two distinct classes of work: (1) The State fertilizer and food inspection, and (2) the instruction of students. The State work necessitates the publication of the "Quarterly" bulletin, which is usually made up of the results of the analyses of fertilizers or feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of the State work, the assistants being invariably college graduates. However, this work serves as a valuable object lesson to the advanced students.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each class—a students' balance room with first-class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and materials are provided from the supply room, as needed.

The department is provided with a small, but well-selected, library of standard reference books on Chemistry, to which additions are made from time to time.

Instruction in Chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals, the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry, which is essential in the education of every man, no matter what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Advanced work in chemistry begins with the Junior year, if the course in chemistry is selected, and the larger part of the student's time is devoted to some branch of theoretical or practical chemistry during the rest of his course, as outlined elsewhere.

The object of the full course in chemistry is to prepare the graduate for positions in agricultural colleges, experiment stations, the United States Department of Agriculture, or in various industries that require the services of trained chemists. The demand for our graduates for such positions is far in excess of the supply.

COURSES OFFERED.

I. General Chemistry. Recitations and practical work in the laboratory, where the student performs the experiments under the direction of the instructors. Qualitative analysis is started in this course.

The text-book is Remsen's "Introduction to the Study of Chemistry."

Sophomore Year, Three Terms; 4 theoretical and 3 to 4 practical periods per week.

II. Elementary Organic Chemistry. A brief outline of the chemistry of the compounds of carbon. This course is preparatory to the more detailed study of Organic Chemistry, which is given later, and at the same time serves to round out the course in General Chemistry for those who pursue the subject no farther.

Text-book: Noyes' "Organic Chemistry."

Junior Year, First Term; 3 periods per week.

III. Qualitative Analysis. Text-book: Seller's "Qualitative Analysis."

Junor Year, First Term; 1 lecture and 12 practical periods per week.

IV. Qualitative Analysis. For students taking Horticultural, Agricultural and General Science Courses.

Text-book: Seller's "Qualitative Analysis."

Junior Year, First Term; 1 lecture and 6 practical periods per week.

V. Inorganic Preparations. The preparation and purification of inorganic compounds, fractional crystallization, etc.

Junior Year, First Term; 4 practical periods per week.

VI. Theoretical Chemistry. A discussion of the fundamental laws and theories of modern Chemistry, with their application in problems.

Text-books: Tilden's "Elements of Chemical Philosophy," and Talbot and Blanchard's "Electrolytic Dissociation Theory."

Junior Year, First Term; 2 periods per week.

VII. Quantitative Analysis. Some of the simpler determinations, so selected as to illustrate the general principles of the subject, are given. Neatness and accuracy are insisted upon in the laboratory, and in the conference period the chemistry and mathematics of each determination are thoroughly discussed.

Text-book: Lincoln and Walton's "Quantitative Analysis."

Junor Year, Second Term; 1 conference and 12 practical periods per week.

VIII. QUANTITATIVE ANALYSIS. For students taking Agricultural and General Science Courses. A brief course illustrating some of the general principles in the quantitative study of Chemistry. In the latter part of the course the Agricultural men are given the option of the analysis of fertilizers, feeds, butter, milk, etc.

Text-book: Lincoln and Walton's "Quantitative Analysis."

Junior Year, Second and Third Terms; 1 conference and 4 practical periods per week. Senior Year, First Term; 4 practical periods per week.

IX. MINERALOGY. This is a course in determinative mineralogy. The more important minerals are identified by their more characteristic physical and chemical properties, the blowpipe being an important aid.

Text-book: Brush and Penfield's "Determinative Mineralogy and Blowpipe Analysis."

Junior Year, Second Term; 1 lecture and 4 practical periods per week.

X. ORGANIC CHEMISTRY. Recitations and lectures.

Text-book: Remsen's "Organic Chemistry."

Junior Year, Second and Third Terms; Senior Year, First Term; 3 periods per week.

XI. ORGANIC PREPARATIONS. The preparation in the laboratory of some of the typical organic compounds, determination of boiling and melting points, lowering of freezing points by substances in solution, determination of vapor densities, and combustion methods for determination of carbon, hydrogen and nitrogen.

Reference book: Levy's "Organische Praeparate," Remsen's "Organic Chemistry," and Gattermann's "Practical Methods of Organic Chemistry," translated by Schober.

Senior Year, Second Term; 16 practical periods per week.

XII. VOLUMETRIC ANALYSIS AND ASSAYING. This course is mostly acidimetry and alkalimetry, the determination of iron, chlorine, silver, etc., by volumetric methods, and the fire assay of gold, silver and lead ores.

Reference books: Sutton's "Volumetric Analysis," and Brown's "Manual of Assaying."

Junior Year, Third Term; 2 lectures and 16 practical periods per week.

XIII. AGRICULTURAL CHEMISTRY. The chemistry of soils, fertilizers, plant life, animal life, etc.

Text-book: Engle's "Manual of Agricultural Chemistry."

Senior Year, First Term; 3 periods per week.

XIV. AGRICULTURAL CHEMICAL ANALYSIS. This is a thorough course in the analysis of fertilizers and fertilizing materials, feeding stuffs, butter, milk, sugar, starch, etc.

Text-book: "Methods of Analysis of the Association of Official Agricultural Chemists."

Senior Year, First Term; 20 practical periods per week.

XV. INDUSTRIAL, PHYSICAL AND ELECTROLYTIC CHEMISTRY. This course is intended to broaden the foundation of the student in Chemistry, and the parts of the subjects covered will be selected with special reference to the bearing on Agricultural Chemistry.

Text-books: Blount and Bloxam's "Chemistry of Manufacturing Processes," Jones' "Physical Chemistry," and Smith's "Electrolytic Chemical Analysis."

Senior Year, Second and Third Terms; 6 periods of lectures and recitations, and 4 periods of laboratory work per week of Second Term, and 5 periods, lectures and recitations during the Third Term.

XVI. RESEARCH. This will occupy nearly all the student's time in the laboratory. The results will be embodied in the graduating thesis.

Senior Year, Third Term; 20 periods per week.

The hours mentioned for practical work in the laboratory are intended to be a minimum. The best students put in considerably more time than this, the laboratories being open to advanced students till 5 o'clock in the evenings, and on Saturdays till noon. Energetic students are glad to avail themselves of these opportunities.

DEPARTMENT OF CIVIL ENGINEERING, ELECTRICAL ENGINEERING AND PHYSICS.

THOMAS HARDY TALIAFERRO, PROFESSOR.

MYRON CREESE, INSTRUCTOR.

CIVIL ENGINEERING.

The subjects pertaining to Civil Engineering are arranged with the object of emphasizing the fundamental principles through lectures and recitations in the class-room, supplemented by practical exercises in the field, drafting room, and laboratory. Self-reliance being an essential factor in the success of an engineer, the student is encouraged in every way to develop this habit.

EQUIPMENT. In addition to minor engineering instruments, etc., the Department is at present equipped with two surveyor's compasses, two transits, and two levels.

COURSES OFFERED. The subjects outlined, with one exception, constitute a portion of the curriculum of students in the Civil Engineering Course.

I. ELEMENTARY MECHANICS. The elements of statics dealing with the composition and resolution of forces, moments, couples, simple machines, and the laws of friction. The elements of dynamics, dealing with velocity, acceleration, laws of motion, work, energy, and applications to simple problems.
Sophomore Year, Second Term; 3 periods per week.

II. ARCHITECTURAL DRAWING. The drawing of floor plans and elevations. Ornamental lettering and title work. Round writing. Perspective drawing. Architectural details.
Sophomore Year, Second Term; 4 periods per week.

III. Elementary Surveying. This course is intended to meet the needs of students in the Agricultural and Horticultural courses. It includes the use of the compass, transit, and level, one or more methods of land surveying, the plotting and computing of areas, leveling, and topographical surveying.

Texts: Robbin's "Elementary Treatise on Surveying," and Notes.

Sophomore Year, Third Term; 3 periods per week of class-room work and 3 periods per week of field practice.

IV. Surveying. This course includes the use and adjustment of engineering instruments, the methods of land surveying, the plotting and computing of areas, dividing of land, the theory of the stadia, true meridian lines, leveling, topographical surveying, railroad curves and cross sectioning.

Texts: Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual."

Junior Year, three terms; 3 periods per week of class-room work, and 5 periods per week of field practice, First Term; 3 periods per week of class-room work, and 2 periods per week of field practice, Second Term; 2 periods per week of class-room work, and 4 periods per week of field practice, Third Term.

V. Topographical Drawing. Practice in free-hand lettering, maps, profiles, topography, etc.

Junior Year, three terms; 6 periods per week, First and Second Terms; 4 periods per week, Third Term.

VI. Railway Engineering. Preliminary and location surveys, cross sectioning, calculation of quantities, etc.

Text: Searles' "Field Engineering."

Junior Year, Third Term, and Senior Year, First Term; 2 periods per week.

VII. Bridge and Structural Designing. The complete design and detailing of a steel roof truss and a plate girder. The detailing from standard commercial drawing sheets of floor beams, girders and columns. The complete design of a bridge truss of either the Warren or Pratt type. The stresses are determined by both analytical and graphic methods.

Texts: Merriman and Jacoby's "Stresses," Cooper's "Bridge Specifications," Cambria hand-book, Thompson's "Bridge and Structural Design," Merriman and Jacoby's "Bridge Design."

Senior Year, three terms; 6 periods per week.

VIII. STRENGTH OF MATERIALS. Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns, and shafts.

Text: Merriman's "Mechanics of Materials."

Senior Year, First Term; 4 periods per week.

IX. HYDRAULICS. Principles of hydraulics, flow through pipes, water supply, etc.

Text: Merriman's "Hydraulics."

Senior Year, Second Term; 5 periods per week.

X. HIGHWAY ENGINEERING. Location, construction, and maintenance of roads.

Texts: Spalding's "Roads and Pavements," and the reports of the Highway Division of the Maryland Geological Survey.

XI. ESTIMATES OF COST. A lecture course on the methods of estimating cost.

Senior Year, Third Term; 1 period per week.

XII. FIELD ENGINEERING. The necessity for practical work on the part of those desiring to enter upon engineering as a profession is obvious. To meet this condition a number of hours have been scheduled for field work in practical problems relating to engineering. The scheduled hours constitute a minimum, the student being encouraged to give as much more of his time as is possible to problems of this character.

Senior Year, three terms; 8 periods per week, First and Second Terms; 12 periods per week, Third Term.

ELECTRICAL ENGINEERING.

It is essential to the stability of every structure that it should not be erected in too great haste. Therefore, for the session of 1908-1909, it is deemed best to offer the Electrical Engineering Course to no students other than those of the Freshman and Sophomore Classes.

Equipment. Equipment is being purchased as the funds permit, and will be adequate to the needs.

Courses Offered. In accordance with the policy above stated, only the outline of the subject for the Sophomore Year is given.

I. Elementary Electricity. This subject includes: Static electricity, dealing with the phenomena of electricity in its potential form, and the conception of electric potential, quantity, capacity, etc; kinetic electricity, including the study of the fundamental laws and units, as Ohm's Law, Joules' Law, units of current, electromotive force, resistance, etc.; theory of magnetism, with its phenomena and forces; and electro-magnetism, which is the foundation for dynamo electric machine design and construction.

Sophomore Year, Second and Third Terms; 2 periods per week.

PHYSICS.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

I. Elementary Physics. The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical application of the principles studied.

Text: Carhart & Chute's "High School Physics."

Sophomore Year, First Term; 4 periods per week.

II. Physics. The course begins with a review of mechanics, after which heat, electricity and magnetism, sound and light are taken up successively by lectures, recitations, problems, and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation and accuracy in making precise measurements.

Texts: Ames' "Theory of Physics," and Ames and Bliss' "Manual of Experiments in Physics."

Junior Year, three terms; 4 periods of class-room work and 4 periods of laboratory work per week.

III. Physics. Advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF ENGLISH AND CIVICS.

F. B. BOMBERGER, PROFESSOR.

CHARLES S. RICHARDSON, ASSISTANT PROFESSOR.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. Clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all; for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, English and American literature, theoretical and practical rhetoric, logic, psychology, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first year is devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current, social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

I. Language and Composition. English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Work in composition consists of the preparation of twelve themes upon assigned topics.

Texts used: Lockwood's "Lessons in English," Buehler's "Exercises in English," and Swinton's "Word Analysis."

Freshman Year, three terms; 5 periods per week.

II. American Literature. A study of the most important writers, with a view to giving the student an exact knowledge of their works.

Text used: Watkin's "American Literature."

Freshman Year, Third Term; 3 periods per week.

III. American Literature. Advanced study of selected works of American authors.

Sophomore Year, Third Term; 4 periods per week.

IV. Rhetoric and Composition. Principles and practice of rhetoric and composition. Work in rhetoric consists of a study of the principles of diction, the sentence, the paragraph, the discourse, forms of prose, and the nature, form and structure of poetry.

Work in composition consists of twelve themes, illustrating special processes.

Text used: Brooks and Hubbard's "Composition-Rhetoric."

Sophomore Year, First and Second Terms; 4 periods per week.

V. English Literature. General study of the history and chief writers of English literature.

Text used: Stopford's Brooke's "English Literature."

Sophomore Year, Third Term; 3 periods per week.

VI. Composition. Practice in English Composition. Special lectures. Work in composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the Third Term.

Junior Year, three terms; 1 period per week.

VII. English Literature. Advanced study of selected works of English authors.

Texts used: Pancoast's "English Literature," Halleck's "English" and Taine's "English Literature."

Junior Year, First Term; 3 periods per week; Second Term, 2 periods per week.

VIII. Logic. Principles and practice of logic.

Text used: Jevon's Hill's "Logic."

Junior Year, Third Term; 3 periods per week.

IX. English Classics. Critical study of English classics.

Senior Year, three terms; 4 periods per week.

X. Psychology. Principles of Psychology. Text-book and lectures.

Text used: Dewey's "Psychology."

Senior Year, First Term; 4 periods per week.

XI. Composition. Advanced work in English Composition. Special lectures. Eight themes illustrating special processes.

Senior Year, three terms; 1 period per week.

HISTORY COURSES.

I. General History. Outlines of general history.

Text used: Fisher's "Brief History of the Nations."

Freshman Year, First and Second Terms; 4 periods per week.

II. English History. Study of the outlines of English history.

Text used: Montgomery's "English History."

Freshman Year, Third Term; 4 periods per week.

III. Current Topics. Seminar discussion of current social, industrial, political and economic events.

Senior Year, Third Term; 2 periods per week.

CIVICS COURSES.

I. Civics. Civil Government in the United States.

Texts used: Fiske's "Civil Government," Hindsdale's "American Government" and Clark's "Outline of Civics."

Junior Year, Second and Third Terms; 3 periods per week.

II. Political Economy. Principles of political economy and industrial development of the United States, economic science and current problems.

Text used: Walker's "Political Economy."

Senior Year, First and Second Terms; 3 and 4 periods per week.

III. Business Law. Lectures on principles of law as used in every-day life and business.

Text used: Parson's "Commercial Law" and Hamilton's "Practical Law."

Senior Year, Third Term; 4 periods per week.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

T. B. SYMONS, PROFESSOR.

L. M. PEAIRS, ASSISTANT.

Instruction is given in this Department with a view of giving the student, first, the general knowledge of invertebrate and vertebrate zoology, which is necessary as a foundation science for an agricultural education. Second, to fit the student in elementary and advanced entomology, both economic and systematic, in order that he may pursue this specialty after graduation. A course in economic entomology is given to provide those students who are specializing in any of the allied agricultural sciences with that information which is necessary to their ideal development.

Students wishing to take advanced work in invertebrate zoology are advised to select some subject in entomology. As the State and Experiment Station entomological work is conducted through this department there are special advantages for students in applied entomology.

The department library contains a majority of the principal entomological publications, which are a great help in advanced work. The laboratory is supplied with a large collection of insects for the use of students, and is well equipped with microscopes and other apparatus necessary for practical work in entomology.

The Insectary of the State Horticultural Department and the Maryland Experiment Station, which is joined to the laboratory, affords facilities for special investigation to a limited number of advanced students.

COURSES OFFERED.

I. Entomology. Lectures, laboratory and field work. This course is designed as an introduction to all the other work in the department. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders and the more important families, the habits and life histories of insects, with special reference to those species that are of economic importance. The laboratory and field work include the study of the more general features of insect anatomy, the determination of some common species and the collection and preservation of insects.

Sophomore Year, Third Term; 2 theoretical and 4 practical periods per week.

II. Zoology. Both invertebrate and vertebrate zoology are discussed in this course. For the time allowed, a very thorough study is made of the classification, anatomy, physiology, characteristics and habits of animals from the lowest to the highest forms. A representative of each of the larger groups is dissected in the laboratory. This course is designed to give the student a general knowledge of zoology.

Junior Year, First Term; 3 theoretical and 6 practical periods per week.

III. Systematic Entomology. Open to students who have taken course I or its equivalent. A thorough study of the structure, habits, life histories and classification of insects. Intended for students wishing to make entomology a specialty.

Junior Year, First and Third Terms; 2 theoretical and 4 practical periods per week.

IV. Economic Entomology. Lectures on applied entomology. Discussion of the more important insect pests and the methods of combating them.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

V. Advanced Entomology. Open only to students who have completed II, III or their equivalents. Morphology and ecology of insects. Special and research work will depend upon the ability and special object of the student. This course is given for those who wish to pursue entomology as a profession. Students making botany their major subject will be required to take the equivalent of 3 theoretical periods per week in entomology.

Senior Year; 10 periods per week.

DEPARTMENT OF HORTICULTURE.

C. P. CLOSE, PROFESSOR.

P. M. NOVIK, ASSSOCIATE PROFESSOR.

G. W. FIROR, ASSISTANT.

F. W. BESLEY, LECTURER ON FORESTRY.

The Horticultural Department offers two courses: (a) a four-year course leading to the degree B. S.; (b) a two-year course for proficiency in which a certificate is awarded.

The instruction in horticulture is specially based upon practical and economical fruit growing, truck farming and commercial floriculture. The orchards, gardens and new greenhouses of the Experiment Station offer to students a splendid opportunity to observe and study modern methods of fruit growing, vegetable growing and the forcing of greenhouse flowers and vegetables. The work in floriculture is supplemented by trips to modern establishments of successful greenhouse men in Baltimore, Washington and vicinity. Similar trips to supplement the work in landscape gardening and truck and fruit growing, are made from time to time. These trips are a portion of the regular work, and are often made on Saturday. Usually the expenses are paid by the College.

Additional facilities and equipment are added annually to make the instruction in horticulture thoroughly practical, efficient and up-to-date.

HORTICULTURAL COURSES.

I. Principles of Plant Propagation and Nursery and Greenhouse Management. This is a discussion of the propagation of plants, and their care in the nurseries and greenhouses. Practice is given in ordinary greenhouse and garden work, including the propagation of plants by seedage, cuttage, layerage and graftage, the planting and potting of plants, etc.

Text-book: "The Nursery Book," Bailey.

Sophomore Year, First Term; 2 theoretical and 2 practical periods per week; Second Term; 3 theoretical periods per week.

II. Olericulture, Vegetable and Truck Gardening. This includes the origin, history and botanical relations of garden vegetables; the careful study of the location, of the soil, of fertilizers, of the general cultivation for vegetable gardens, of the forcing of early and tender vegetables, and of the making and management of hot-beds and cold-frames.

Text-book: "Vegetable Gardening," Green.

Junior Year, Third Term; 2 theoretical and 3 practical periods per week.

III. Practical Pomology I: Fruit Growing (Orcharding). This is a discussion of the principles underlying the growing of orchard fruits. The work begins with the origin of our cultivated fruits and the practical methods of propagating them. Next follows the study of location for orchards and the planting of trees. General care and practice are given in the proper pruning of all classes of fruits. In the College nursery the students propagate different kinds of nursery stock.

Text-books: "The Nursery Book," Bailey and "The Principles of Fruit Growing," Bailey.

Junior Year, First and Second Terms; 2 theoretical and 2 practical periods per week.

IV. Practical Pomology II: Small Fruits. Lectures and practice in the propagation, planting and care of strawberries and bush fruits on a commercial basis.

Text-book: "Bush Fruits," Card.

Senior Year, Third Term; 2 theoretical and 2 practical periods per week.

V. Systematic Pomology. This embraces a study of the evolution and relationship of the economic fruits; the study and describing of fruits and fruit trees, the study and drawing of buds, leaves and fruits. Different kinds of fruit are collected from all parts of the State for study and identification by the students.

Text-book: "Systematic Pomology," Waugh. Reference books: "The Evolution of Our Native Fruits," Bailey; "The American Fruit Culturist," Thomas; and several others.

Senior Year, First and Third Terms; 2 theoretical and 2 practical periods per week.

VI. Harvesting, Storing and Marketing of Fruits and Vegetables. The following points are discussed: profitable marketing of garden and orchard products, harvesting, packing, storing, and marketing of fruits and vegetables, market methods, the middle man, pools and shipping associations, refrigerator cars and cold storage and the utilization of waste and by-products.

Text-book: "Fruit Harvesting, Storing, Marketing," Waugh.

Senior Year, Third Term; 2 periods per week.

VII. Greenhouse Construction. Lectures and drawing. A study of the materials used for greenhouses, heating systems, etc. A discussion of the different kinds of greenhouses, and their adaptation for different purposes.

Text-book: "Greenhouse Construction," Taft.

Senior Year, Second Term; 1 theoretical and 3 practical periods per week.

VIII. Floriculture I: Culture of Cut Flowers. Lectures and greenhouse practice. This course is devoted to a thorough discussion of the special cut-flower business. It includes the propagation, growing and forcing of the most important cut-flower plants, the kind of houses best adapted for special cultures, the studying of varieties, scoring, etc.

Text-book: "Greenhouse Management," Taft.

Junior Year, Second Term; 3 theoretical and 2 practical periods per week.

IX. FLORICULTURE II: DECORATIVE PLANTS FOR HOUSE AND GARDEN. Lectures and instruction are given on the preparation of soils, and the growing of foliage and flowering plants for commercial and decorative purposes; the propagation of annuals and perennials for planting in the garden; the planting of window boxes and hanging baskets, etc. The students are required to name the plants in the College greenhouse and on the campus.

Text-books: "Greenhouse Management," Taft; "Practical Floriculture," Henderson.

Junior Year, Third Term; 3 theoretical and 2 practical periods per week.

X. PLANT BREEDING. This course commences with a study of theories on evolution and heredity. Then follows a thorough discussion of the modern plant-breeding methods as they are applied in this and foreign countries by important plant breeders. Cross-pollination work is done by the students in the College greenhouse and orchard.

Senior Year, Second and Third Terms; 2 periods per week.

XI. LANDSCAPE GARDENING. Lectures, designing and practical work. The course commences with a study of the relation of the garden to architecture, and it continues with a study of the modern garden, the homestead, the playground, the public parks and the cemetery. It embraces a discussion of the technics of making lawns, walks and drives, beds of annuals and perennials, and the planting of trees and shrubs. On the completion of this course students must be familiar with all the trees, shrubs and other ornamentals used on the College lawns and campus.

Text-book: "Principles of Landscape Gardening," Waugh; and several references.

Senior Year, First and Second Terms; 4 periods per week.

XII. Research Work and Thesis. This work is given to the student to test and develop his powers of observation and initiation. The subject will be arranged with each student individually, and the results will be written up for a thesis, which is required of all candidates for the B. S. degree.

Junior Year, Third Term; 2 periods per week; Senior Year, three terms; 8 periods per week.

XIII. Post-Graduate Work. An opportunity for advanced work is given to candidates who have the B. S. degree.

FORESTRY COURSES.

The following courses in Forestry are offered:

I. General Forestry. Five lectures embodying a general survey of the subject, and its relation to agriculture and other industries. (Course I is included in the weekly lecture course in Agriculture.)

II. Farm Forestry. Includes Forest Botany, Woodlot Management, Measurement and Valuation of Forest Crops, Nursery Practice and Tree Planting. Lectures, recitations and field work.

Text-book: "Principles of American Forestry," Green.

Senior Year, Second Term; 3 periods per week (required in Horticultural and Agricultural Courses—elective in General Science).

III. Wood Technology. A study of common commercial woods, their structure, identification, uses and commercial value. Decay of woods and methods of preservation.

Senior Year, Second Term; 1 period per week (required in Mechanical and Civil Engineering Courses—optional in Agricultural and Horticultural).

DEPARTMENT OF LANGUAGES.

THOMAS H. SPENCE, PROFESSOR.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German. Students may elect to take Latin in the Freshman year in place of History.

The course of study in Latin is given with two ends in view—first, to train the mind into accurate and close methods of reasoning; second, to give the student a more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin forms and terminations and to the derivation of English words from Latin roots.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given, therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, frequently there are no English versions of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the special line of work which he may be pursuing. The study of French is offered as an option in the Senior Year.

LATIN COURSES.

I. Grammar and Composition. For students of the Freshman class who elect Latin in place of History.

The aim of this course is to give the student a familiarity with Latin forms and terminations, and to enable him to read simple Latin prose.

Text-books: Gildersleeve's "New Latin Primer," Collier and Daniel's "First Year Latin," or Bingham's "Latin Grammar."

Freshman Year, three terms; 4 and 3 periods per week.

GERMAN COURSES.

I. Grammar and Conversation. Text-book: Otis' "Elementary German."

Sophomore Year, Third Term; 5 periods per week.

II. Translation. Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrup's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Junior Year, three terms; 3 periods per week.

III. Translation of Scientific German. Selected readings from various texts and periodicals.

Senior Year, three terms; 4 periods per week.

FRENCH COURSES.

I. Grammar and Composition. Text-book: Chardenal's "Complete French Course."

Sophomore Year, First Term; 4 periods per week.

II. Translation. Text-books: Super's "French Reader," Rougemont's "La France," Fenelon's "Telemaque," Herdler's "Scientific French Reader," and French scientific periodicals.

Sophomore Year, Second and Third Terms; 4 periods per week. Alternative with German in Senior Year; Second Term, 5 periods per week; Third Term, 4 periods per week.

DEPARTMENT OF MATHEMATICS.

R. W. SILVESTER, PROFESSOR.

HENRY T. HARRISON, ASSISTANT PROFESSOR.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in Mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry, descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a requisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

COURSES OFFERED.

I. Elementary Mathematics. General Review.
Freshman Year, First Term; 3 periods per week.

II. Algebra. Text-book: Wentworth's "Complete Algebra."
Freshman Year, three terms; 5 periods per week, First Term; 8 periods per week, Second Term; 3 periods per week, Third Term.

III. Plane Geometry. Text-book: Wentworth's "Plane Geometry."
Freshman Year, Third Term, Sophomore Year, First Term; 5 periods per week.

IV. Trigonometry. Text-book: Wentworth's "Plane Trigonometry."
Sophomore Year, Second Term; 5 periods per week.

V. Solid Geometry. Text-book: Wentworth's Solid Geometry.
Sophomore Year, Third Term; 5 periods per week.

VI. Analytical Geometry. Text-book: Wentworth's "Analytics."
Junior Year, First Term; 5 periods per week.

VII. Calculus. Text-book: Osborne's.
Junior Year, Second and Third Terms; 5 periods per week.

DEPARTMENT OF MECHANICAL ENGINEERING.

HARRY GWINNER, PROFESSOR.

HOWARD L. CRISP, ASSISTANT.

WILLIAM N. MICHAEL, ASSISTANT.

This department offers a four-year course to those who desire to prepare themselves to design and construct machinery or to superintend engineering establishments. The design of the course is to furnish such theoretical instruction and engineering practice as will prepare its graduates for immediate usefulness in the factory and office, and enable them, after a moderate amount of professional experience, to fill positions of trust and importance in this profession.

Instruction is given by means of lectures and recitations, accompanied by a large amount of practice in the drafting rooms and shops.

The course leads to the degree of B. S. in Mechanical Engineering upon the satisfactory completion of the work outlined.

EQUIPMENT. The Mechanical Engineering Laboratories consist of a two-story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and lecture rooms; a one-story brick building, in which is the forge shop and foundry; and an annex, 25 by 50 feet, containing the boilers, which furnish steam for power, heat and experimental purposes, and the electric lighting equipment.

The wood-working shop contains accommodations for students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, a grindstone and an Oliver trimmer.

In the forge shops are sixteen power forges, two hand forges and a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, a brass furnace, one Mellett core-oven, and the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 22-inch Fifield engine-lathe with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine-lathes, one 24-inch Gray planer, one 16-inch Smith andMills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

The machinery of the pattern and machine shops is driven by a 9 by 14-inch automatic cut off, high speed engine, built by members of the Junior and Senior Mechanical Engineering classes, after the standard design of the Atlas engine. An 8 by 12-inch engine drives the machinery of the blacksmith shop and foundry. It was presented to the College by the city of Baltimore, and secured through the efforts of Rear-Admiral John D. Ford, United States Navy, retired.

The drafting rooms are well equipped for practical work, being well lighted and of ample size.

COURSES OFFERED.

I. Mechanical Drawing. Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being enclosed in covers properly titled by the students.

Text-book: Rouillion's "Mechanical Drawing."

Freshman Year, three terms; 6 periods per week.

II. Freehand Drawing. Straight and curved lines, lettering, leaves, plants and ornaments.

Freshman Year, First Term; 6 periods per week.

III. Technical Instruction. Explanation of the reading of mechanical drawings; the proper cutting angles, care and adjustment of carpenter tools; relative strength of wood joints; wood, its shrinking and warping, and how to correct and prevent. Drill in problems in arithmetic, algebra and drawing by notes and lectures.

Text-book: Goss' "Bench Work in Wood."

Freshman Year, First Term; 3 periods per week.

IV. Wood Work. During the first term is taught the use and care of bench tools, exercise in sawing, mortising, tenoning and laying out work from blue prints. The second term is devoted to projects involving construction, decoration and wood turning. During the third term the principles and processes of pattern making are taught, together with enough foundry work to demonstrate the uses of pattern making.

Freshman Year, three terms; 6 periods per week.

V. Mechanical Drawing. Detailing of machinery and drawing to scale from blue prints. Tracing and blue printing, and representation of flat and round surfaces by ink shading.

Text-book: Rouillion's "Mechanical Drawing."

Sophomore Year, First Term; 6 periods per week.

VI. ELEMENTARY APPLIED MECHANICS. Transmission of power by belts and pulleys, the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting and bending moments of beams.

Text-book: Jamieson's "Applied Mechanics."

Sophomore Year, First Term; 4 periods per week.

VII. BLACKSMITHING. The making of the fire, and how to keep it in order. The operations of drawing-out, upsetting and bending of iron and steel, including the calculations of stock for bent shapes. Welding. Construction of steel tools for use in the machine shop, including tool dressing and tempering. Annealing.

Sophomore Year, First and Second Terms; 4 periods per week.

VIII. FOUNDRY WORK. Moulding in iron and brass. Core making. The cupola and its management. Lectures on the selections of irons by fracture, fuels, melting and mixing of metals.

Sophomore Year, Third Term; 8 periods per week.

IX. DESCRIPTIVE GEOMETRY. Its relation to mechanical drawing and the solution of such problems relating to magnitudes in space as bear directly upon those which present themselves to civil and mechanical engineers.

Text-book: Faunce's "Descriptive Geometry."

Sophomore Year, Second and Third Terms; 7 periods per week.

X. ELEMENTARY MACHINE DESIGN. Freehand sketching of the details of machinery and making working drawings of same. Calculations and drawings of a simple type of steam engine. Notes and lectures.

Junior Year, three terms; 6 periods per week.

XI. MACHINE WORK. Elementary principles of vise and machine work, which include turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

Junior Year, three terms; 6 periods per week.

XII. STEAM ENGINES AND BOILERS. The principles of steam and the steam engine, the slide valve and valve diagrams, the indicator and its diagram; steam boilers, the various types and their advantages.

Text-book: Jamieson's "Steam and Steam Engines."

Junior Year, First Term; 4 periods per week.

XIII. Power Plants. Lectures on the location, construction, equipment and engineering of power plants.

Text-book: Hutton's "Mechanical Engineering of Power Plants."

Senior Year, Second Term; 3 periods per week.

XIV. Advanced Machine Design. The First Term is devoted to lectures and text-book work on the strength and proportions of machine parts, and the design of a hand winch or crab by rational and empirical methods. During the Second Term the student is thrown upon his own resources to grapple with assigned problems. During the Third Term, the time is devoted to the design of a power punch and hand power crane.

Text-books: Low and Bevis' "Machine Drawing and Design," Cambria and Carnegie hand-books, Kent's "Mechanical Engineer's Pocket Book."

Senior Year, three terms; 6 periods per week.

XV. Graphic Statics. The theory and practice of the graphical method of determining stresses in cranes, roof trusses and bridges, and stress on beams and girders due to traveling loads.

Text-book: Merriman and Jacoby's "Graphic Statics."

Senior Year, First Term; 4 periods per week.

XVI. Machine Shop Work. Advanced machine work; the laying out, assembling and construction of some piece of machinery such as an engine-lathe or dynamo.

Senior Year, three terms; 8 periods per week.

XVII. Elementary Experimental Engineering. Determining the amount of moisture in steam, the efficiency of the injector, the transit and its uses, indicator practice and the use of the planimeter, slide value setting, the slide rule and micrometer, the analysis of boiler feed water, and flue gases, the determination of proper lubricants.

Senior Year, Third Term; 6 periods per week.

MILITARY DEPARTMENT.

EDWARD LLOYD, MAJOR, U. S. A., COMMANDANT.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics, and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battalion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the Department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

DISCIPLINE.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent, and his parents or guardian must at once remove him from the College.

MILITARY PROMOTION.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class. These officers are required to serve for the year, performing all duties imposed by the regulations of the College as a part of their regular course of training. Their conduct as officers will be rated as a study, having a value of five (5) theoretical periods per week, and a quarterly grade will be given. Failure to perform such duties shall constitute a deficiency, causing forfeiture of both diploma and commission. All members of the Senior Class will be required to perform these duties. All seniors with quarters in barracks will be required to drill either as officers or privates. Sergeants are selected from the Junior Class, and corporals from the Sophomore Class. Exceptions will be made to this order, only when the number of men in any one class qualified for promotion is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

UNIFORM.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

DEPARTMENT OF ORATORY.

CHARLES S. RICHARDSON, PROFESSOR.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

COURSES OFFERED.

I. Elocution. Articulation, accent, modulation, inflection, force and elocutionary pause; expressive management of the body, attitude and motion. Selections of poetry and prose are read and declaimed by students.

Freshman Year, First Term; 1 period per week.

II. Elocution. Simple lectures on orators and oratory. Methods of analysis and subjects for orations. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Freshman Year, Second Term; 2 periods per week.

III. Elocution. A review of all the work of the Freshman Year. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc.). Lectures on ancient and modern orators, with readings and declamations, by students, from orations.

Sophomore Year, First Term; 1 period per week.

IV. Elocution. Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day as Tariff, Currency, Territorial Expansion, Trades Unions, Trusts, Federal Control of Public Utilites, etc. Lectures on parliamentary law.

Sophomore Year, Second Term; 2 periods per week.

DEPARTMENT OF PHYSICAL CULTURE.

CHARLES S. RICHARDSON, DIRECTOR.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastic and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory and Freshman years.

Three periods per week, Preparatory and First and Second Terms, Freshman Year.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning, and also at the end of each scholastic year. By means of these measurements and tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

PREPARATORY DEPARTMENT.

HENRY T. HARRISON, PROFESSOR IN CHARGE.

CHARLES S. RICHARDSON, ASSOCIATE.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

COURSES OFFERED.

I. ARITHMETIC. Wentworth's "Grammar School Arithmetic," completed.
First and Second Term; 10 periods per week.

II. ARITHMETIC. Advanced work.
Third Term; 5 periods per week.

III. ALGEBRA. Wentworth's "Algebra" as far as quadratics.
Three terms; 5 periods per week.

IV. History. United States History, completed.
Three terms; 4 periods per week.

V. Geography. Descriptive Geography, completed.
First Term; 5 periods per week.

VI. Geography. Davis's "Physical Geography." Completed.
Second and Third Terms; 4 periods per week.

VII. English. Spelling, technical grammar, parsing and analysis, composition, letter writing and elocution.
Three terms; 8 periods per week.

VIII. Book-keeping. Single Entry.
Third Term; 6 periods per week.

DEPARTMENT OF VETERINARY SCIENCE.

SAMUEL S. BUCKLEY, PROFESSOR.

The veterinary subjects offered in this department are intended only to supplement the instruction given in the Agricultural courses, so that the student will have had a well-rounded practical education upon completion of the work of the Agricultural Department. Only those subjects of practical value in the care and management of animals are considered—the diseases known to be common to the animals of Maryland being given especial attention. The structures and functions of the digestive and milk-secreting organs are studied thoroughly on account of their practical importance.

COURSES OFFERED.

I. Microscopy and Animal Histology. This includes the study of the microscope, its use and care. Preparation of objects for immediate examination and permanent mounts. Preparation of tissues, sectioning, staining and mounting. Methods of measurement, enumeration and drawing of microscopic objects. The study of cells, tissues and organs of the animal body. The work is both theoretical and practical.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

II. Comparative Anatomy and Physiology. For students in the Agricultural and General Science Courses. This course embraces a general consideration of the structures and functions of the animal body, with especial reference to animal production and dairying. It is not intended as preliminary to professional veterinary work, as such training necessarily comes within the province of veterinary colleges. It is, however, preparatory to the instruction given in veterinary elements in the Senior Year under Course III.

Junior Year, Second Term; 3 theoretical and 6 practical periods per week.

III. Veterinary Elements. For students of the Agricultural (Animal Husbandry) Course.

Senior Year, Second Term; 4 theoretical and 6 practical periods per week.

Note A—Students of the First Year of the Two-Year Agricultural Course will receive Course II with the Junior Class, and those of the Second Year will receive Course III with the Senior Class.

Note B—Lectures on veterinary subjects will be offered for students of the Short Winter Course in Agriculture.

THE COLLEGE LIBRARY.

F. B. BOMBERGER, LIBRARIAN.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several thousand volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

The works in the Library are classified according to the modern Dewey Decimal System of classification. As rapidly as possible the sets of Government Reports that are most valuable are being completed and catalogued. At present there are on hand completed to date, or nearing completion, sets of the reports and bulletins of the United States Agricultural Department, the Geological Survey, the Fish Commission, the Smithsonian Institution, the National Museum, the Bureau of Ethnology, the Bureau of Education, the Labor Bureau, the Census Bureau and the Bureau of American Republics. There are also nearly completed sets of the Consular Reports, Special Consular Reports, the Engineers Reports of the United States Army, the War of the Rebellion Record and messages and documents, besides many other miscellaneous publications of great value. Many valuable State publications are also on file.

It is the aim of the Librarian to render all these valuable works available for easy reference by the students.

Grateful acknowledgment is made to the officers of all the departments and bureaus above noted for their publications, and especially to the United States Superintendent of Documents, through whose aid many public documents have been received. Thanks are likewise due the following for valuable additions to the Library: Johns Hopkins University, the Geological Survey, the Weather Service, the Highway Commission, and the Bureau of Statistics and Information. Especial thanks are due the county press for their liberality in sending their publications free to the Library.

COURSES OF STUDY.

In order to systematize the work of the different departments of the College, and as far as possible arrange for specialization within limits consistent with the normal development of individual students, six distinct courses of study have been prepared, one of which the student is expected to choose upon entering the regular college work.

These courses are Agriculture, Horticulture, General Science, Chemistry, Mechanical Engineering, Electrical Engineering and Civil Engineering.

A continuous and progressive course of work, beginning in the Freshman year, with a nearly uniform course for all students, and gradually separating in the three succeeding years until the class-work is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation in English, mathematics and history is laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the tabular statement of the courses the hours per week are given, the numbers in parenthesis denoting practical or laboratory periods, others theoretical or recitation periods.

AGRICULTURAL COURSES.

The four-year agricultural course is designed to fit the student for conducting practical operations on the farm, or, should taste or circumstance so direct, to successfully prosecute advanced scientific research along the lines of agronomy or animal husbandry. With this end in view, the course has been made at once comprehensive and technical, comprehensive enough to include whatever is necessary for the complete development of the work, yet technical enough to make the student feel that he is a specialist and equipped for special work.

This course is the result of development. While a man must specialize to attain any eminent success, yet in agricultural science it is not possible to specialize to the same degree as in some others, because it is itself made up of many sciences. Experience has clearly shown also that in agriculture the practical must keep even pace with the theoretical, that true education trains the eye and hand as well as the intellect, and should give to the student the ability not only to acquire and originate ideas, but also to express them in words and deeds.

Throughout the Freshman year and the first two terms of the Sophomore year the course is non-technical.

At the beginning of the third term of the Sophomore year, agronomy, the production of farm crops, is taken up by all students of agriculture.

In the Junior year the course is divided into two sections, known as the Division of Agronomy and the Division of Animal Husbandry. This arrangement enables the student to specialize along whichever line accords with his interests or desires, while at the same time he is taught the fundamental facts of both. This enables him to see most clearly, and to harmonize his work to, the relations which must exist between these great branches of agriculture.

TWO-YEAR COURSE IN AGRICULTURE.

A large number of young men seeking to better themselves in their chosen profession of farming are calling for instruction in those courses pertaining to practical agriculture. Many of them have neither the time nor means at hand to take the full four-year course, but while away in school they wish to gain the greatest possible amount of instruction and assistance which is particularly applicable to the farm. The farm can no longer be run in the old-time haphazard way. There is a demand for skill and the highest order of intelligence to make a success on the farm, as in any other line of human endeavor. Brains must be planted with each little seed, and again put into the feeding trough for the animal. To meet the demand for instruction along these lines, and for a better understanding of the underlying principles of successful agriculture, a short course of two years has been provided.

It embraces much of the technical work of the four-year course, and is especially designed to lay a foundation that will secure success in practical farming, which, as it must be conducted today, is a union of many interests. To enter this course a working knowledge of arithmetic, including fractions, mensuration and percentage, and a common-school training in English, is required.

Four Year Agricultural Course, Freshman and Sophomore Years.

Arabic figures indicate periods per week, those in parenthesis being practical work. The Roman numerals refer to courses described on previous pages.

FRESHMAN.	Terms.			SOPHOMORE.	Terms.		
	I.	II.	III.		I.	II.	III.
Elementary Mathematics (Math. I.)	3	......	......	Plane Geometry (Math. III.)	5	......	......
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)	.....	5	......
Plane Geometry (Math. III.)	......	......	5	Solid Geometry (Math. V.)	......	......	(1)
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	......
American Literature (Engl. II.)	......	......	3	English Literature (Engl. V.)	......	......	3
*General History (Hist. I.)	4	4	......	Elocution III. and IV.	1	2	......
*English History (Hist. II.)	......	......	4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
*Latin Grammar and Composition (Lat. I.)	4	4	4	Physics, Elementary (Phys. I.)	4	......	......
Elocution I. and II.	1	2	......	Elementary Surveying (C. E. III.)	......	......	2(4)
Physical Culture	(3)	(3)	......	Mechanical Drawing (M. E. I.)	(6)	......	......
Geology	4	5	......	Plant Propagation (Hort. I.)	2(2)	3	......
Agricultural Lectures	(2)	(2)	(2)	Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)	......	2(4)	......	Farm Crops (Agron. I.)	......	......	3(4)
Systematic Botany (Bot. II.)	......	......	2(4)	Plant Physiology (Bot. III.)	......	2(4)	......
Freehand Drawing (M. E. II.)	(6)	.....	......	Miscroscopy and Animal Hist. (Vet. Sci. I.)	......	(6)	......
Wood Work (M. E. IV.)	......	......	(6)	Entomology I.	......	......	2(4)
				German Grammar and Comp. (Germ. I.)	......	......	5(1)

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*History and Latin alternative.

Four-Year Agricultural Course, Junior and Senior Years.

Agronomy Division.

JUNIOR.	Terms.			SENIOR	Terms.		
	I	II	III		I	II	III.
English Composition (Engl. VI.)	1	1	1	English Classics (Engl. IX.)	4	4	4
Civics I		3	3	Psychology (Engl. X.)	4		
German Translation (Germ. II.)	3	3	3	English Composition (Engl. XI.)	1	1	1
Elementary Organic Chemistry (Chem. II.)	3			Current Topics (Hist. III.)			1(1)
Qualitative Analysis (Chem IV.)	1(6)			Political Economy (Civics III.)	3	4	
Quantitative Analysis (Chem. VIII.)		1(4)	1(4)	Business Law (Civics III.)			4
Mineralogy (Chem. IX.)		1(4)		Scientific German (Germ. III.)	4		
Economic Plants (Bot. VI.)			2(4)	Agricultural Chemistry (Chem. XIII.)	3		
Agricultural Lectures	(2)	(2)	(2)	Quantitative Analysis (Chem. VIII.)	(4)		
Farm Crops (Agron. I.)		2(2)	2(4)	Vegetable Pathology (Bot. VIII.)		2(4)	
Soils (Agron. II.)	2(2)	3(4)		Agricultural Lectures	(2)	(2)	(2)
Farm Drainage (Agron. III.)			2(2)	Plant Production (Agron. IV.)	3(4)		
Breeds and Scoring (A. H. I.)	3(4)			Fertilizers (Agron. V.)		3(4)	
Principles of Breeding (A. H. II.)	3			Farm Machinery (Agron. VI.)			2(4)
Live Stock Management (A. H. III.)		2		Farm Management (Agron. VII.)			2
Olericulture (Hort. II.)			2(3)	Crop Produc. or Soils (Agron. VIII, IX.)			2(4)
Pomology (Hort. III.)	2(2)	2(2)		Farm Forestry (For. II.)		3	
				Plant Breeding (Hort. X.)		2	2
				Research and Thesis	(2)	2(4)	2(4)

Four-Year Agricultural Course, Junior and Senior Years.

Animal Husbandry Division.

JUNIOR.	Terms.			SENIOR.	Terms.		
	I.	II.	III.		I.	II.	III.
English Composition (Engl. VI.)	1	1	1	English Classics (Engl. IX.)	4		
Civics I		3	3	Psychology (Engl. X.)	*4		
German Translation (Germ. II.)	3	3	3	English Composition (Engl. XI.)	1	1	1
Elementary Organic Chemistry (Chem. II.)	3			Current Topics (Hist. III.)			1(1)
Qualitative Analysis (Chem. IV.)	1(6)			Political Economy (Civics II.)	3	4	
Quantitative Analysis (Chem. VIII.)		1(4)	1(4)	Business Law (Civics III.)			4
Organic Chemistry (Chem. X.)		3	3	Scientific German (Germ. III.)	*4		
Zoology (Entom. II.)	3(3)			Agricultural Chemistry (Chem. XIII.)	3		
Anatomy and Physiology (Vet. Sci. II.)		3(6)		Quantitative Analysis (Chem. VIII.)	(4)		
Agricultural Lectures	(2)	(2)	(2)	Veterinary Science (Vet. Sci. III.)		4(6)	
Soils (Agron. II.)	2(2)	3(4)		Agricultural Lectures	(2)	(2)	(2)
Farm Drainage (Agron. III.)			2(2)	Farm Management (Agron. VII.)			2
Breeds and Scoring (A. H. I.)	3(4)			Stock Judging (A. H. V.)	(4)		
Principles of Breeding (A. H. II.)	3			Herd Book (A. H. VI.)	2(2)		
Live Stock Management (A. H. III.)		2	2(2)	Animal Nutrition (A. H. VII.)		4	4(4)
Dairying (A. H. IV.)			3(4)	Farm Forestry (For. II.)		3	
Research (A. H. IX.)			2(2)	Small Fruits (Hort. IV.)			2(2)
				Research and Thesis	(2)	2(4)	4(4)

*Psychology and German alternative.

Two-Year Course in Agriculture.

FIRST YEAR.	Terms.			SECOND YEAR.	Terms.		
	I	II	III		I	II	III
English Composition (Engl. I.)	5	5	5	Farm Management (Agron. VII.)			2
Plant Culture (Hort. I.)	2(2)	3		Principles of Breeding (A. H. II.)	3		
Farm Crops (Agron. I.)	2(4)		2(4)	Fertilizers (Agron. V.)		3(4)	
Soils (Agron. II.)	2(2)	3(4)		Farm Machinery (Agron. VI.)			2(4)
Drainage (Agron. III.)			2(2)	Animal Nutrition (A. H. VIII.)		4	
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)	Grain Judging (Agron. I.)		1(4)	
Breeds and Scoring (A. H. I.)	3(4)			Agricultural Lectures	(2)	(2)	(2)
Live Stock Management (A. H. III.)		2	2(2)	Wood Work (M. E. IV.)	(6)		
Botany I and II			2(4)	English Composition (Engl. VI.)	1	1	1
Agricultural Lectures	(2)	(2)	(2)	Business Law (Civics III.)	3		
Anatomy and Physiology (Vet. Sci. II.)		(9)		Farm Forestry (For. II.)		3	
				Pomology (Hort. III.)	2(2)	2(2)	
				Fruit Harvesting (Hort. VI.)			2
				Economic Entomology (Ent. IV.)			2(4)
				Dairying (A. H. IV.)			3(4)
				Plant Production (Agron. IV.)	4(4)		2(2)
				Veterinary Science (Vet. Sci. III.)		4(6)	
				Stock Judging (A. H. V.)	(4)		
				Vegetable Gardening (Hort. II.)			2(3)

Upon completion of this course a certificate is granted, taking the place of the diploma for the four-year course.

SPECIAL WINTER COURSE IN AGRICULTURE.

A ten-week course, designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-year course; this solves the problem for them.

Each student will be required to take not less than two hundred and fifty hours of work. Two hundred of these must be devoted to the following specified studies:

Soils, 22 hours.
Farm Dairying, 20 hours.
Manures, 20 hours.
Plant Production, 25 hours.
Agricultural Chemistry, 20 hours.
Farm Live Stock, 30 hours.
Stock Feeding, 15 hours.
Horticulture, 40 hours.

The other fifty hours will be devoted to such topics as the student may elect from the following: Veterinary Science, 40 hours; Tobacco Culture, 5 hours; Plant Physiology and Pathology, 15 hours; Economic Entomology, 20 hours; Carpentering and Blacksmithing, 45 hours; Farm Accounts, 12 hours; Road Construction and Leveling, 5 hours; Civil Government, 10 hours.

Tuition and room free. No expense for use of laboratories or supplies. Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within a short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College at $40.00 for the course. Students will be expected to furnish their own bed clothes, pillows, towels, napkins and overalls for dairy work. Short course students are not required to drill or wear uniforms.

CHEMICAL COURSE.

The Course in Chemistry is essentially the same as the General Science Course until the beginning of the Junior year, though any of the four-year courses would prepare for this, as the amount of chemistry is the same in all courses to the end of the Sophomore year, and the demands on the agricultural or technical chemist are now so varied that a foundation with more of the essentials of the agricultural or the mechanical courses is often desirable.

Beginning with the Junior year the major part of the student's time is devoted to chemistry, the practical work in the laboratory occupying approximately half of his time. The course is essentially a course in agricultural chemistry, fitting the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture.

CIVIL ENGINEERING COURSE.

This course offers a young man an opportunity to obtain training in civil engineering that will enable him to engage in practical engineering work in the field or in the drafting room with the assurance that he has the necessary preparation to profit by the experience thus afforded; or that will entitle him to advanced standing, if he desires to pursue a more extended course at a technical school of higher grade. The curriculum, which is outlined on the following pages, includes not only studies having culture value, but the sciences which form the basis of engineering. Students who have found themselves deficient in ability to learn mathematics are not advised to enter an engineering course. Upon the satisfactory completion of this course the degree of Bachelor of Science in Civil Engineering, is conferred.

Students during the Second Term of the Junior year will be required to examine some work on Engineering, and make a report to the class.

A thesis dealing with some problem in Engineering will be required of all applicants for the degree of Bachelor of Science in Civil Engineering.

All engineering students in the Junior and Senior Classes will be required to spend a portion of their time in the reading of the current engineering magazines.

Chemical Course.

FRESHMAN.	Terms. I.	II.	III.	SOPHOMORE.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			5
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
General History (Hist. I.)	4	4		American Literature (Engl. III.)			2(2)
*English History (Hist. II.)			4	Elocution III and IV	1	2	
*Latin Grammar and Comp. (Latin I.)	4	4	4	General Chemistry (Chem. I.)	4(3)	4(4)	5(7)
Elocution I and II	1	2		Physics Elementary (Phys. I.)	4		
Physical Culture	(3)	(3)		Plant Propagation (Hort. I.)	2(2)	3	
Agricultural Lectures	(2)	(2)	(2)	Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)		2(4)		French Grammar and Composition (Fr. I.)	4		
Systematic Botany (Bot. II.)			2(4)	Microscopy and Animal Hist. (Vet. Sci. I.)		(6)	
Freehand Drawing (M. E. II.)	(6)			German, Grammar and Comp. (Germ. I.)			5(1)
Geology	4	5		French Translation (Fr. II.)		4	3
Mechanical Drawing (M. E. I.)			(6)				
JUNIOR.				**SENIOR.**			
English Composition (Engl. VI.)	1	1	1	English Composition (Engl. XI.)	1	1	1
Civics I		3	3	Current Topics (Hist. III.)			1(1)
German Translation (Germ. II.)	3	3	3	Political Economy (Civics II.)	3	4	
Physics II	4(4)	4(4)	4(4)	Business Law (Civics III.)			4
Elementary Org. Chem. (Chem. II.)	3			Scientific German (Germ. III.)	4	4	4
Qualitative Analysis (Chem. III.)	1(12)			Organic Chemistry (Chem. X.)	3		
Inorganic Preparations (Chem. V.)	(4)			Organic Preparations (Chem. XI.)		(16)	
Theoretical Chemistry (Chem. VI.)	2			Agricultural Chemistry (Chem. XIII.)	3		
Quantitative Analysis (Chem. VII.)		1(12)		Agricultural Analysis (Chem. XIV.)	(20)		
Mineralogy (Chem. IX.)		1(4)		Indus. Phys. and Elec. Chem. (Chem. XV.)		6(4)	5
Organic Chemistry (Chem. X.)		3	3	Agricultural Lectures	(2)	(2)	(2)
Volumetric Analysis (Chem. XII.)			2(16)	Research and Thesis (Chem. XVI.)			(20)
Agricultural Lectures	(2)	(2)	(2)				

Civil Engineering Course.

FRESHMAN	Terms. I.	II.	III.	SOPHOMORE.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			5
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
*General History (Hist. I.)	4	4		American Literature (Engl. III.)			2(2)
*English History (Engl. II.)			4	Elocution III and IV	1	2	
*Latin Grammar and Composition (Lat. I.)	4	4	4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Elocution I and II	1	2		Physics, Elementary (Phys. I.)	4		
Physical Culture	(3)	(3)		Mechanics, Elementary (C. E. I.)		3	
Geology	4	5		Architectural Drawing (C. E. II.)		(4)	
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)	Mechanical Drawing (M. E. V.)	(6)		
Wood Work (M. E. IV.)			(6)	Applied Mechanics (M. E. VI.)	4		
				Blacksmithing (M. E. VII)	(4)		
				Descriptive Geometry (M. E. IX.)		3(4)	3(4)
				German Grammar and Comp. (Germ. I.)			5(1)
JUNIOR.				SENIOR.			
Analytical Geometry (Math. VI.)	5			English Composition (Engl. XI.)	1	1	1
Calculus (Math. VII.)		5	5	Current Topics (Hist. III.)			1(1)
English Composition (Engl. VI.)	1	1	1	Political Economy (Civics II.)	3	4	
Civics I		3	3	Business Law (Civics III.)			4
German Translation (Germ. II.)	3	3	3	†Scientific German (Germ. III.)	4	4	4
Physics II	4(4)	4(4)	4(4)	†French		5	4
Surveying (C. E. IV.)	3(5)	3(2)	2(4)	Graphic Statics (M. E. XI.)	4		
Topographical Drawings (C. E. V.)	(6)	(6)	(4)	Structural Design (C. E. VII.)	2(4)	2(4)	2(4)
Railway Engineering (C. E. VI.)			2	Strength of Materials (C. E. VIII.)	4		
				Hydraulics (C. E. IX.)		5	
				Railway Engineering (C. E. VI.)	2		
				Highway Engineering (C. E. X.)			3
				Estimates of Cost (C. E. XI.)			1
				Field Engineering (C. E. XII.)	(8)	(8)	(12)
				Wood Technology (For. III)		1	

ELECTRICAL ENGINEERING COURSE.

This course is being introduced because of the great demand for young men who are not only well trained in the practical construction and operation of electrical machines, but who have a thorough knowledge of the principles and laws controlling the phenomena and forces with which they have to deal.

The general plan of the course will be to make the student thoroughly acquainted with the scientific laws which are the basis of the profession, and at the same time to train him to adapt the laws to practise, to use his own judgment, and to apply honest and accurate methods in all his work.

The curriculum, as outlined in the following pages, for the Freshman and Sophomore Classes of the Session 1908-1909, includes those studies which provide a broad general culture, as well as a good foundation for the engineering work which follows. From the beginning of the Second Term of the Sophomore Year the electrical training will extend continuously throughout the course.

GENERAL SCIENCE COURSE.

The General Science Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science. The basis of this course is a thorough training in mathematics, English and the principles of citizenship and government.

The scientific work of this includes Agriculture, Horticulture, Botany, Physics, Chemistry, Entomology, Zoology and Veterinary Science. In his first two years the student receives a general introduction to the several sciences, one of which in his Junior and Senior Year becomes his choice for more detailed work. A thesis upon some topic in the selected field completes his course, and entitles him to the degree of Bachelor of Science.

Electrical Engineering Course.

FRESHMAN.	Terms.			SOPHOMORE.	Terms.		
	I.	II.	III.		I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			5
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
*General History (Hist. I.)	4	4		Elocution III. and IV.	1	2	
*English History (Hist. II.)			4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
*Latin Grammar and Composition (Lat. I.)	4	4	4	Physics, Elementary (Phys. I.)	4		
Elocution I. and II.	1	2		Electricity, Elementary (E. E. I.)		2	2
Physical Culture.	(3)	(3)		Mechanics, Elementary (C. E. I.)		3	
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)	Mechanical Drawing (M. E. V.)	(6)		
Technical Instruction (M. E. III.)	3			Applied Mechanics (M. E. VI.)	4		
Wood Work (M. E. IV.)	(6)	(6)	(6)	Blacksmithing (M. E. VII.)	(4)		
				Foundry Work (M. E. VIII.)			(4)
				Descriptive Geometry (M. E. IX.)		3(4)	3(4)
				German Grammar and Comp. (Germ. I.)			5(1)

*Latin and History are alternative.

The curriculum for the Junior and Senior Years will be outlined as required.

FRESHMAN.	I.	II.	III.	SOPHOMORE.	I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			(1)
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
*General History (Hist. I.)	4	4		Elocution III. and IV	1	2	
*English History (Hist. II.)			4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
*Latin Grammar and Composition (Lat. I.)	4	4	4	Physics, Elementary (Phys. I.)	4		
Elocution I. and II	1	2		Elementary Surveying (C. E. III.)			2(4)
Physical Culture	(3)	(3)		Mechanical Drawing (M. E. I.)	(6)		
Geology	4	5		Plant Production (Hort. I.)	2(2)	3	
Agricultural Lectures	(2)	(2)	(2)	Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)		2(4)		Farm Crops (Agron. I.)			3(4)
Systematic Botany (Bot. II.)			2(4)	Plant Physiology (Bot. III.)		2(4)	
Freehand Drawing (M. E. II.)	(6)			Microscopy and Animal Histol. (Vet. Sci. I.)		(6)	
Wood Work (M. E. IV.)			(6)	Entomology I			2(4)
				German Grammar and Comp. (Germ. I.)			5(1)
JUNIOR.				SENIOR.			
English Composition (Engl. VI.)	1	1	1	English Classics (Engl. IX.)	4	4	4
†English Literature (Engl. VII.)	3	2		Psychology (Engl. X.)	4		
Civics I.		3	3	English Composition (Engl. XI.)	1	1	1
†Logic (Engl. VIII.)			3	Current Topics (Hist. III.)			1(1)
German Translation (Germ. II.)	3	3	3	Political Economy (Civics II.)	3	4	
Physics II	4(4)	4(4)	4(4)	Business Law (Civics III.)			4
Elementary Organic Chemistry (Chem. II.)	3			*Scientific German (Germ. III.)	4	4	4
Qualitative Analysis (Chem. IV.)	1(6)			*French		5	4
Quantitative Analysis (Chem. VIII.)		1(4)	1(4)	‡Farm Forestry (For. II.)		3	
Mineralogy (Chem. IX.)		1(4)		Agricultural Lectures	(2)	(2)	(2)
Zoology (Entom. II.)	3(6)			Mycology (Bot. VII.)	2(2)		
†Systematic Entomology (Entom. III.)	2(4)		2(4)	Advanced Entomology (Entom. V.)	3	3	3
Economic Entomology (Entom. IV.)			2(4)	§Botany VIII., IX., X., or Entomology V.	7	8	10
Plant Morphology (Bot. V.)			2(4)	Plant Breeding (Hort. X.)		2	
Agricultural Lectures	(2)	(2)	(2)				
Anatomy and Physiology (Vet. Sci. II.)		3(6)					

*History and Latin, and French and German alternative. †Literature and Logic replace Entomology for Botanical students. ‡Elective.
§Largely Practical.

FOUR-YEAR COURSE IN HORTICULTURE.

The Horticultural Course is designed to give practical and scientific instruction in the great productive occupation of Horticulture. Practical work in orchard, garden and greenhouse is made a prominent feature of the course, especially in its early part, which is designed to train young men in all the details of general fruit and truck growing. In this work the orchards, nursery and vineyard of the College and Experiment Station, which contain a great many varieties of all hardy commercial fruits, are used for practice and demonstration.

In the Freshman and Sophomore years the work is not materially different from that of the Agricultural and General Science courses, but in the Junior and Senior years the subjects of the course become grouped and specialized, and include a thesis upon some horticultural topic.

The advanced work in Horticulture is built on the practical work before outlined, but tends to the scientific side, and the training of men for scholastic and experimental work in colleges, experiment stations, or in the Department of Agriculture. Excursions are made by the students to floral establishments in Baltimore and Washington to note and study the commercial aspects of floriculture. Models in landscape architecture and treatment are furnished by the parks and government grounds in and about the national capital. The State Horticultural Society, by its meetings and exhibitions, affords the horticultural students of the College excellent training in the work of identifying, noting and judging fruit and vegetables.

TWO-YEAR COURSE IN HORTICULTURE.

The two-year course in Horticulture is intended for young men who wish to devote themselves to fruit and vegetable growing, or to commercial nursery or flower business, and who cannot afford the time required for a regular college course.

The course includes practically all of the subjects given in the Department of Horticulture, and those of the courses in Agriculture that are of importance for the study of general horticulture. Besides these, there is also a good training in English language, botany, entomology and chemistry.

Upon finishing the Course the student gets a certificate which gives him credit for the work he has completed at the College.

FRESHMAN.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3		
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)			5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)			3
*General History (Hist. I.)	4	4	
*English History (Hist. II.)			4
*Latin Grammar and Comp. (Latin I.)	4	4	4
Elocution I and II	1	2	
Physical Culture	(3)	(3)	
Geology	4	5	
Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)		2(4)	
Systematic Botany (Bot. II.)			2(4)
Freehand Drawing (M. E. II.)	(6)		
Woodwork (M. E. IV.)			(6)

SOPHOMORE.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5		
Trigonometry (Math. IV.)		5	
Solid Geometry (Math. V.)			(1)
Rhetoric and Composition (Engl. VI.)	4	4	
English Literature (Engl. V.)			3
Elocution III and IV	1	2	
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Elementary Surveying (C. E. III.)			2(4)
Physics, Elementary (Phys. I.)	4		
Mechanical Drawing (M. E. I.)	(6)		
Plant Propagation (Hort. I.)	2(2)	3	
Agricultural Lectures	(2)	(2)	(2)
Farm Crops (Agron. I.)			3(4)
Plant Physiology (Bot. III.)		2(4)	
Microscopy and Animal Hist. (Vet. Sci. I.)		(6)	
Entomology			2(4)
German Grammar and Comp. (Germ. I.)			5(1)

JUNIOR.	I.	II.	III.
English Composition (Engl. VI.)	1	1	1
English Literature (Engl. VII.)	3	2	
Civics I.		3	3
German Translation (Germ. II.)	3	3	3
Elementary Organic Chemistry (Chem. II.)	3		
Qualitative Analysis (Chem. IV.)	1(6)		
Systematic Entomology (Ent. III.)			2(4)
Plant Histology (Bot. IV.)		(8)	
Plant Morphology (Bot. V.)	1(3)		
Economic Plants (Bot. VI.)			2(4)
Agricultural Lectures	(2)	(2)	(2)
Soils (Agron. II.)	2(2)	4(2)	
Farm Drainage (Agron. III.)			2(2)
Olericulture (Hort. II.)			2(3)
Pomology (Hort. III.)	2(2)	2(2)	
Floriculture (Hort. VIII, IX.)		3(2)	3(2)
Research (Hort. XII.)			(2)

SENIOR.	I.	II.	III.
*English Classics (Engl. IX.)	4		
Psychology (Engl. X.)	4		
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)			1(1)
Political Economy (Civics II.)	3	4	
Business Law (Civics III.)			4
*Scientific German (Germ. III.)	4		
Agricultural Chemistry (Chem. XIII.)	3		
Mycology (Bot. VII.)	2(2)		
Vegetable Pathology (Bot. VIII.)		2(4)	
Agricultural Lectures	(2)	(2)	(2)
Farm Machinery (Agron. VI.)			(4)
Farm Forestry (For. II.)		3	
Pomology, Systematic (Hort. V.)	2(2)		2(2)
Small Fruits (Hort. IV.)			2(2)
Fruit Harvesting, etc. (Hort. VI.)			2
Greenhouse Construction (Hort. VII.)		1(3)	
Plant Breeding (Hort. X.)		2	2
Landscape Gardening (Hort. XI.)	2(2)	2(2)	
Research and Thesis	(4)	(4)	(8)

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* History and Latin, and English Classics and German alternative.

Two-Year Course in Horticulture.

FIRST YEAR.	Terms.			SECOND YEAR.	Terms.		
	I	II	III		I	II	III
English Composition (Engl. I.)	5	5	5	Fertilizers (Agron. V.)		3(4)	
Plant Culture (Hort. I.)	2(2)	3		Farm Machinery (Agron. VI.)			2(4)
Farm Crops (Agron. I.)	2(4)			Agricultural Lectures	(2)	(2)	(2)
Soils (Agron. II.)	2(2)	3(2)		English Composition (Engl. VI.)	1	1	1
Drainage (Agron. III.)			2(2)	Farm Forestry (For. II.)		3	
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)	Pomology (Hort. III.)	2(2)	2(2)	
Botany I, II, III, IV and VI	2(4)	2(4)	2(4)	Fruit Harvesting (Hort. VI.)			2
Agricultural Lectures	(2)	(2)	(2)	Chemistry (Chem. III.)	3		
Arithmetic	3			Plant Pathology (Bot. VIII.)		2(4)	
Mechanical Drawing (M. E. I.)		(6)		Economic Entomology (Ent. IV.)			2(4)
Entomology (I.)			2(4)	Fruit Growing (Hort. III.)	2(2)	2(2)	
Gardening (Hort. II.)			2(3)	Small Fruit Growing (Hort. IV.)			2(2)
				Systematic Pomology (Hort. V.)	2(2)		2(2)
				Plant Breeding (Hort. X.)		2	2
				*Greenhouse Construction (Hort. VII.)		1(3)	
				*Floriculture (Hort. VIII, IX.)		3(2)	3(2)
				*Landscape Gardening (Hort. XI.)	2(2)	2(2)	
				Freehand Drawing (M. E. II.)	(6)		
				Farm Crops (Agron. IV.)	2(4)		2(2)

*As needed.

MECHANICAL ENGINEERING COURSE.

The work of the several years of this course differs from the preceding courses (Agricultural, Horticultural and General Science) mainly in the omission of those subjects of a biological character and inclusion of mathematics and shop work. The shop work supplements the mathematical, especially in the last two years, when problems in machine design are worked out, so far as time allows, in the actual construction of the parts designed. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements used in wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. Results have shown that students completing this course have no difficulty in securing employment immediately upon graduation in the field of mechanics or mechanical engineering.

Mechanical Engineering Course.

FRESHMAN.	Terms.			SOPHOMORE.	Terms.		
	I.	II.	III.		I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			5
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. II.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
*General History (Hist. I.)	4	4		Elocution III. and IV.	1	2	
*English History (Hist. II.)			4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
*Latin Grammar and Composition (Lat. I.)	4	4	4	Physics, Elementary (Phys. I.)	4		
Elocution I. and II	1	2		Mechanics, Elementary (C. E. I.)		3	
Physical Culture	(3)	(3)		Mechanical Drawing (M. E. V.)	(6)		
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)	Applied Mechanics (M. E. VI.)	4		
Technical Instruction (M. E. III.)	3			Blacksmithing (M. E. VII.)	(4)	(4)	
Wood Work (M. E. IV.)	(6)	(6)	(6)	Foundry Work (M. E. VIII.)			(8)
				Descriptive Geometry (M. E. IX.)		3(4)	3(4)
				German Grammar and Comp. (Germ. I.)			5
JUNIOR.				SENIOR.			
Analytical Geometry (Math. VI.)	5			English Composition (Engl. XI.)	1	1	1
Calculus (Math. VII.)		5	5	Current Topics (Hist. III.)			1(1)
English Composition (Engl. VI.)	1	1	1	Political Economy (Civics II.)	3	4	
Civics I		3	3	Business Law (Civics III.)			4
German Translation (Germ. II.)	3	3	3	*Scientific German (Germ. III.)	4	4	4
Machine Design (M. E. X.)	2(4)	2(4)	2(4)	*French		5	4
Machine Work (M. E. XI.)	(6)	(6)	(6)	Power Plants (M. E. XIII.)		3	
Steam Engines (M. E. XII.)	4			Machine Design (M. E. XIV.)	2(4)	2(4)	2(4)
Physics II	4(4)	4(4)	4(4)	Graphic Statics (M. E. XV.)	4		
				Machine Work (M. E. XVI.)	(8)	(8)	(8)
				Experimental Engineering (M. E. XVII.)			3(3)
				Strength of Materials (C. E. VIII.)	4		
				Wood Technology (For. III.)		1	
				Research and Thesis		‡	‡

*Latin and History, and German and French alternative.
‡As required.

SYNOPSIS OF COURSES—FRESHMAN YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; E. E., Electrical Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM			SECOND TERM			THIRD TERM			
	Ch., G. S. Ag., A. H. H.	C. E.	M. E., E. E.	Ch., G. S., Ag., A. H., H.	C. E.	M. E., E. E.	Ag., A. H., H., G. S.,	Ch.	C. E.	M. E., E. E.
Elementary Mathematics (Math. I.)	3	3	3							
Algebra (Math. II.)	5	5	5	8	8	8	3	3	3	3
Plane Geometry (Math. III.)							5	5	5	5
Language and Composition (Engl. I.)	5	5	5	5	5	5	5	5	5	5
American Literature (Engl. II.)							3	3	3	3
*General History (Hist. I.)	4	4	4	4	4	4				
*English History (Hist. II.)							4	4	4	4
*Latin Grammar and Composition (Latin I.)	4	4	4	4	4	4	4	4	4	4
Elocution I and II	1	1	1	2	2	2				
Physical Culture	(3)	(3)	(3)	(3)	(3)	(3)				
Geology	4	4		5	5					
Agricultural Lectures	(2)			(2)			(2)	(2)		
Elementary Botany (Bot. I.)				2(4)						
Systematic Botany (Bot. II.)							2(4)	2(4)		
Mechanical Drawing (M. E. I.)		(6)	(6)		(6)	(6)		(6)	(6)	(6)
Freehand Drawing (M. E. II.)	(6)									
Technical Instruction (M. E. III.)			3							
Wood Work (M. E. IV.)			(6)			(6)	(6)		(6)	(6)

*History and Latin alternative.

SYNOPSIS OF COURSES—SOPHOMORE YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The different courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; E. E., Electrical Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.				SECOND TERM.					THIRD TERM.				
	Ag., A. H., H., G. S.	Ch.	C. E.	E. E., M. E.	Ag., A. H., H., G. S.	Ch.	C. E.	E. E.	M. E.	Ag., A. H., H., G. S.	Ch.	C. E.	E. E.	M. E.
Plane Geometry (Math III.)	5	5	5	5										
Trigonometry (Math. IV.)					5	5	5	5	5					
Solid Geometry (Math. V.)										(1)	5	5	5	5
Rhetoric and Composition (Engl. IV.)	4	4	4	4	4	4	4	4	4					
English Literature (Engl. V.)										3	3	3	3	3
American Literature (Engl. III.)											2(2)	2(2)		
Elocution III. and IV.	1	1	1	1	2	2	2	2	2					
General Chemistry (Chem. I.)	4(3)	4(3)	4(3)	4(3)	4(4)	4(4)	4(4)	4(4)	4(4)	4(3)	5(7)	4(3)	4(3)	4(3)
Physics, Elementary (Phys. I.)	4	4	4	4										
Electricity, Elementary (E. E. I.)								2					2	
Mechanics, Elementary (C. E. I.)							3	3	3					
Architectural Drawing (C. E. II.)							(4)							
Surveying, Elementary (C. E. III.)										2(4)				
Mechanical Drawing (M. E. V.)	(6)		(6)	(6)										
Applied Mechanics (M. E. VI.)			4	4										
Blacksmithing (M. E. VII.)			(4)	(4)					(4)					
Foundry Work (M. E. VIII.)													(4)	(8)
Descriptive Geometry (M. E. IX.)							3(4)	3(4)	3(4)			3(4)	3(4)	3(4)
Plant Propagation (Hort. I.)	2(2)	2(2)			3	3								
Agricultural Lectures	(2)	(2)			(2)	(2)				(2)	(2)			
Farm Crops (Agron. I.)										3(4)				
French Grammar and Composition (Fr. I.)		4												
French Translation (Fr. II.)						4					3			
Plant Physiology (Bot. III.)					2(4)									
Microscopy and Animal Histol. (Vet. Sci. I.)					(6)	(6)								
Entomology I.										2(4)				
German Grammar and Comp. (Germ. I.)										5(1)	5(1)	5(1)	5(1)	5(1)

SYNOPSIS OF COURSES—JUNIOR YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The different courses are represented by the abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.							SECOND TERM.							THIRD TERM.						
	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.
Analytical Geometry (Math. VI.)					5	5															
Calculus (Math. VII.)												5	5						5	5	
English Composition (Engl. VI.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*English Literature (Engl. VII.)			3				*3			2				2							
Civics I.								3	3	3	3	3	3	3	3	3	3	3	3	3	3
*Logic (Engl. VIII.)																					*3
German Translation (Germ. II.)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Machine Design (M. E. X.)						2(4)							2(4)							2(4)	
Machine Work (M. E. XI.)						(6)							(6)							(6)	
Steam Engines (M. E. XII.)						4															
Physics II.				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	4(4)
Elementary Organic Chemistry (Chem. II.)	3	3	3	3			3														
Qualitative Analysis (Chem. III and IV.)	1(6)	1(6)	1(6)	1(12)			1(6)														
Inorganic Preparations (Chem. V.)				(4)																	
Theoretical Chemistry (Chem. VI,)				2																	
Quantitative Analysis (Chem. VII, VIII.)								1(4)	1(4)		1(12)			1(4)	1(4)	1(4)					1(4)
Mineralogy (Chem. IX.)								1(4)			1 (4)			1(4)							
Organic Chemistry (Chem. X.)									3		3					3		3			
Volumetric Analysis (Chem. XII.)																		2(16)			
Surveying (C. E. IV.)					3(5)							3(2)							2(4)		
Topographical Drawing (C. E. V.)					(6)							(6)							(4)		
Railway Engineering (C. E. VI.)																			2		
Zoology (Entom. II.)		3(3)					3(6)														
*Systematic Entomology (Entom. III.)							*2(4)										2(4)				*2(4)
Economic Entomology (Entom. IV.)																					2(4)
Anatomy and Physiology (Vet. Sci. II.)									3(6)					3(6)							
Plant Histology (Bot. IV.)										(8)											
Plant Morphology and Classif. (Bot. V.)			1(3)																		2(4)
Economic Plants (Bot. VI.)															2(4)		2(4)				
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Farm Crops (Agron. I.)								2(2)							2(4)						
Soils (Agron. II.)	2(2)	2(2)	2(2)					3(4)	3(4)	3(4)											
Farm Drainage (Agron. III,)															2(2)	2(2)	2(2)				
Breeds and Scoring (A. H. I.)	3(4)	3(4)																			
Principles of Breeding (A. H. II.)	3	3																			
Live Stock Management (A. H. III.)								2	2							2(2)					
Dairying (A. H. IV.)																3(4)					
Olericulture (Hort. II.)															2(3)		2(3)				
Pomology (Hort. III.)	2(2)		2(2)					2(2)		2(2)											
Floriculture (Hort. VIII, IX.)										3(2)							3(2)				
Research (Hort. XII, A. H. IX.)																(2)	(2)				

* General Science Students take English Literature in the First Term and Logic in the Third Term instead of Systematic Entomology if they expect to pursue Botanical courses the next year.

SYNOPSIS OF COURSES—SENIOR YEAR.

The figures represent the number of recitation periods per week. Those in parenthesis indicating practical or laboratory work. The different courses are represented, as on preceding page, by the abbreviations: Ag., A. H., H., Ch., C. E., M. E., G. S.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.							SECOND TERM.							THIRD TERM.						
	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.
*English Classics (Engl. IX.)	4	4	*4				4	4						4	4						4
*Psychology (Engl. X.)	4	*4	4				4														
English Composition (Engl. XI.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Current Topics (Hist. III.)															1(1)	1(1)	1(1)	1 (1)	1 (1)	1(1)	1(1)
Political Economy (Civics II.)	3	3	3	3	3	3	3	4	4	4	4	4	4	4							
Business Law (Civics III.)															4	4	4	4	4	4	4
*Scientific German (Germ. III.)	4	*4	*4	4	4	4	4				4	*4	*4	*4				4	*4	*4	*4
*French												*5	*5	*5					*4	*4	*4
Organic Chemistry (Chem. X.)				3																	
Organic Preparations (Chem. XI.)											(16)										
Agricultural Chemistry (Chem. XIII.)	3	3	3	3																	
Agricultural Analysis (Chem. XIV.)				(20)																	
Indus., Phys. and Elec. Chem. (Chem. XV.)											6 (4)							5			
Quantitative Analysis (Chem. VIII.)	(4)	(4)																			
Power Plants (M. E. XIII.)													3								
Machine Design (M. E. XIV.)						2(4)							2(4)							2(4)	
Graphic Statics (M. E. XV.)					4	4															
Machine Work (M. E. XVI.)						(8)							(8)							(8)	
Experimental Engineering (M. E. XVII.)																				3(3)	
Structural Design (C. E. VII.)					2(4)							2(4)							2 (4)		
Strength of Materials (C. E. VIII.)					4	4															
Hydraulics (C. E. IX.)												5									
Railway Engineering (C. E. VI.)					2																
Highway Engineering (C. E. X.)																			3		
Field Engineering (C. E. XII.)					(8)							(8)							(12)		
Estimates of Cost (C. E. XV.)																			1		
Mycology (Bot. VII.)			2(2)																		
Vegetable Pathology (Bot. VIII.)								2(4)		2(4)											
†Botany IX. and Entomology V.							†13							†13							†13
Veterinary Science (Vet. Sci. III.)									4(6)												
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Plant Production (Agron. IV.)	3(4)																				
Fertilizers (Agron. V.)								3(4)													
Farm Machinery (Agron. VI.)															2(4)		(4)				
Farm Management (Agron. VII.)															2	2					
Crop Prod. (Ag. VIII.) or Soils (Ag. IX.)															2(4)						
Stock Judging (A. H. V.)		(4)																			
Herdbook (A. H. VI.)		2(2)																			
Animal Nutrition (A. H. VII.)									4							4(4)					
Farm Forestry (For. II.)								3	3	3				*3							
Wood Technology (For. III.)												1	1								
Pomology, Systematic (Hort. V.)			2(2)														2(2)				
Small Fruits (Hort. IV.)																2(2)	2(2)				
Fruit Harvesting, Etc. (Hort. VI.)										2							2				
Greenhouse Construction (Hort. VII.)										1(3)											
Plant Breeding (Hort. X.)								2		2				2	2		2				
Landscape Gardening (Hort. XI.)			2(2)							2(2)											
Research and Thesis	(2)	(2)	(4)					2(4)	2(4)	(4)			‡		2(4)	4(4)	(8)	(20)		‡	

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*Animal Husbandry students take either Psychology or German. Horticultural students take either English Classics or German. Engineering and

SYNOPSIS OF TWO-YEAR COURSES IN AGRICULTURE AND HORTICULTURE.

The figures represent the number of recitation periods per week; those in parenthesis indicating practical or laboratory work.
The Roman numerals below are the numbers of courses described in the various departments on preceding pages.

	FIRST YEAR.					
	FIRST TERM.		SECOND TERM.		THIRD TERM.	
	Agri.	Hor.	Agri.	Hor.	Agri.	Hor.
English Composition (Engl. I.)	5	5	5	5	5	5
Plant Culture (Hort. I.)	2(2)	2(2)	3	3	....	.....
Farm Crops (Agron. I.)	2(4)	2(4)	......	.....	2(4)	.....
Soils (Agron. II.)	2(2)	2(2)	3(4)	3(2)	....	.....
Drainage (Agron. III.)	......	......	......	.....	2(2)	2(2)
General Chemistry (Chem. I.)	4(3)	4(3)	4(4)	4(4)	4(3)	4(3)
Breeds and Scoring (A. H. I.)	3(4)	......	......	.....	....	.....
Live Stock Management (A. H. III.)	......	......	2	.....	2(2)	.....
Botany I., II., III., IV. and VI	......	2(4)	......	2(4)	2(4)	2(4)
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Arithmetic	......	3	......	.....	....	.....
Mechanical Drawing (M. E. I.)	......	......	......	(6)	....	.....
Entomology I	......	......	......	.....	....	2(4)
Gardening (Hort. II.)	......	......	......	.....	....	2(3)
Anatomy and Physiology (Vet. Sci. II.)	......	......	(9)	.....	....	.....

	SECOND YEAR.					
	FIRST TERM.		SECOND TERM.		THIRD TERM.	
	Agri.	Hor.	Agri.	Hor.	Agri.	Hor.
Farm Management (Agron. VII.)	......	.....	......	.....	2	....
Principles of Breeding (A. H. II.)	3	.....	......	.....	.....	....
Stock Judging (A. H. V.)	(4)	.....	......	.....	.....	....
Fertilizers (Agron. V.)	......	.....	3(4)	3(4)	.....	....
Farm Machinery (Agron. VI.)	......	.....	......	.....	2(4)	2(4)
Animal Nutrition (A. H. VIII.)	......	.....	4	.....	.....	....
Grain Judging (Agron. I.)	......	.....	1(4)	.....	.....	....
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Wood Work (M. E. IV.)	(6)	.....	......	.....	.....	....
English Composition (Engl. VI.)	1	1	1	1	1	1
Business Law (Civics III.)	3	.....	......	.....	.....	....
Farm Forestry (For. II.)	......	.....	3	3	.....	....
Pomology (Hort, III.)	2(2)	2(2)	2(2)	2(2)	.....	....
Fruit Harvesting (Hort. VI.)	......	.....	......	.....	2	2
Vegetable Gardening (Hort, II.)	......	.....	......	.....	2(3)	....
Chemistry (Chem. II.)	......	3	......	.....	.....	....
Plant Pathology (Bot. VIII.)	......	.....	......	2(4)	.....	....
Economic Entomology (Ent. IV,)	......	.....	......	.....	2(4)	2(4)
Fruit Growing (Hort. III.)	......	2(2)	......	2(2)	.....	....
Small Fruit Growing (Hort. IV.)	......	.....	......	.....	.....	2(2)
Systematic Pomology (Hort. V.)	......	2(2)	......	.....	.....	2(2)
Plant Breeding (Hort. X.)	......	.....	......	2	.....	2
*Greenhouse Construction (Hort. VII.)	......	.....	......	1(3)	.....	....
*Floriculture (Hort. VIII. and IX.)	......	.....	......	3(2)	.....	3(2)
*Landscape Gardening (Hort. XI.)	......	2(2)	......	2(2)	.....	....
Freehand Drawing (M. E. II.)	......	(6)	......	.....	.....	....
Dairying (A. H. IV.)	......	.....	......	.....	3(4)	....
Farm Crops (Agron. IV.)	4(4)	2(4)	......	.....	2(2)	2(2)
Veterinary Science (Vet. Sci. III.)	......	.....	4(6)	.....	.....	....

*As needed.

GENERAL INFORMATION.

REQUIREMENTS FOR ADMISSION.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 15th and 16th, 1908. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic complete, algebra, as far as quadratics, political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic, as far as percentage, United States history and political geography.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present a certificate from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and wood work.

Every applicant for admission to the College must bring satisfactory testimonials as to his character and scholarship from his former teacher. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

EXAMINATIONS AND PROMOTIONS

In order to pass from one class to the next higher a student is required to pass an examination in each study pursued by a mark of at least sixty per cent., and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical or Civil Engineering Courses will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

REPORTS.

Detailed reports are sent to parents and guardians at the end of every quarter. These give the grade of the student in every branch of study, his attendance record, and his conduct record with comment by the President upon each item.

In addition to this, monthly reports are issued for October, November, January, February and April. These give general information as to scholarship, conduct, attendance and health, and call attention to deficiency in any one of these particulars.

GRADUATION AND DEGREES.

BACHELOR OF SCIENCE.

As a requisite for graduation, the candidate for this degree must, in addition to having satisfactorily completed the work previously outlined, submit a thesis, which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

MASTER OF SCIENCE.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon college graduates of not less than two years' standing, who are employed in any of the departments of the College, and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

MASTER OF ARTS.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or

theses must be approved by the President of the College, the Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

MECHANICAL ENGINEER.

The degree of Mechanical Engineer (M. E.) may be conferred by the Faculty as follows:

1. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course consisting of a major and two minor subjects, and who have passed the required examination and presented a satisfactory thesis. (The course of study to be outlined by the heads of the Departments of Civil, Electrical and Mechanical Engineering, and approved by the Faculty).

2. Upon graduates of this College who have had three years' professional experience of an acceptable character. Such candidates must present to the Faculty a full report of such experience, and such other information as to the qualifications for the degree as may be found desirable, and in addition shall present a satisfactory thesis.

3. All candidates must be at least Junior members of the American Society of Mechanical Engineers. All applications for degrees must have the approval of the Faculty twelve months prior to the date they contemplate receiving the degree, and the thesis must be presented at least one month prior to such date.

CIVIL ENGINEER.

The degree of Civil Engineer may be conferred upon any candidate who is a graduate of this College with the degree of Bachelor of Science in Civil Engineering, and has been engaged in engineering pursuits for not less than three years since graduation, provided:

1. That he shall be a member of the American Society of Civil Engineers.

2. That he shall accompany his application with a synopsis of the work upon which he bases his request.

3. That the Committee composed of the heads of Civil, Electrical and Mechanical Engineering Departments, to whom his application shall be referred, shall consider him eligible.

4. That previous to receiving the degree he shall comply with such further conditions, if any, as the aforesaid committee shall impose.

SCHOLARSHIPS AND FELLOWSHIPS.

COMPETITIVE SCHOLARSHIPS.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted in Baltimore City, by the Superintendent of Public Instruction, and in the counties by the County School Superintendent. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present themselves at the College, or other designated place, at the date which may be named in the September or January next following the award, and be examined by College authorities for entrance to the Freshman Class. Alternates are to be thus examined, as well as principals, and in case of a failure of the principal to secure or hold the scholarship, the alternate will have the first right to the place declared vacant, if within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to secure the same, pass the entrance examination of the College, and (if entering in January) such other examination as may be required to join *the Freshman Class. To hold a scholarship, the student must make all payments promptly, and meet such requirements of the College as to scholarship and deportment as may be prescribed by the President and Faculty. By passing special examinations, or by presenting satisfactory certificates, candidates for scholarship may be permitted to enter the Sophomore Class."* A student who fails of promotion, thereby forfeits his scholarship and the School Board which granted such scholarship will be notified accordingly.

INDUSTRIAL SCHOLARSHIPS.

There are also offered by the College a limited number of "Industrial Scholarships." The holder of such a scholarship is required to work as a waiter or janitor a definite number of hours per day; these hours are so arranged as to conflict as little as possible with his time for study or recitation. Industrial scholarship students are not required to drill.

In consideration of their work a rebate of $140 a year is granted each of these students.

A selection is made from applicants for these scholarships on the basis of mental preparation, physical ability and moral character. Preference will be given to the sons of citizens of Maryland. Applications for this scholarship specifying age, weight, mental advancement and enclosing testimonial of moral character must be made in writing to the President of the College prior to September 1st, and the successful applicants for this scholarship will be notified to report in person at the College in September.

STUDENT OPPORTUNITIES.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference.

FACILITIES FOR RELIGIOUS WORSHIP.

The College is undenominational in character. The daily exercises of the College are opened with worship in the College Chapel.

Every Sunday afternoon services are conducted by a minister of some Christian denomination, an effort being made to have all the more prominent churches represented in the pulpit. There is an Episcopal Church at College Park; and at Berwyn, one mile north, and at Riverdale, one mile south, are Presbyterian churches. In Hyattsville, two miles south, may be found Catholic, Episcopal, Presbyterian, Baptist and Methodist churches. Students are encouraged to attend the church with which they desire to worship.

COLLEGE REGULATIONS.

The attention of parents is earnestly called to the following rules in force at this College: The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures in a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to parents during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian, and received by the President of the College:

"It is understood that the President of the College as the executive of the same, and acting for the Board of Trustees, a party to this contract, *has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations herein set forth."*

A cadet manifesting an indifference to the observance of the rules and regulations of the institution, or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so his parents, upon notice given by the President, must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examinations is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that failure to live up to this pledge is a dishonor which unfits them to be longer students of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone calls, unless they are urgent.

Students will not be permitted to make contracts or to sell any article to their associates without the approval of the President.

The sale of second-hand furniture or clothing to new cadets is prohibited unless the sale be approved by the commandant of cadets.

The College will not be responsible for articles left in the barracks during vacation, nor for valuables left by students in their rooms at any time. They should be deposited with the College Treasurer, who will place them in the College safe and give a receipt therefor.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE, ENDORSED BY THE FACULTY.

1. A student may not change his course of study unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.

2. Examinations to make up conditions will be given only at times set apart by this committee. These dates will be just before the regular quarterly examinations in December, March and June; also the day before the resumption of college work in September. Notice of intention to take these examinations must be filed in writing with the chairman of the schedule committee at least 10 days before examinations commence. Should, for any reason, a special examination be requested at any other time a charge of $2.00 will be made for each subject on which the applicant is examined.

3. To attain proficiency a student must make an examination grade of 60 per cent.; also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent. is required.

4. A student may not be promoted if conditioned in more than one study.

5. A student may not be promoted if he has any conditions of more than a year outstanding.

6. No student may be promoted from the Preparatory Department with any condition.

7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.

8. A student is subject to an oral examination at any time within ten days after written examination.

9. An examination paper, containing erasure or showing alterations, may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.

10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.

11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

13. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the College seal nor the Governor's signature.

14. No student may take work in more than one class during any one term.

STUDENT EXPENSES.

No charge is made to boarding students for tuition, books or diplomas. No reductions are made for regular vacations.

The expenses of the College year for the several classes of students are as follows:

Boarding Students.—Board, heat, light and room, $60.00 per quarter.

Scholarship Students.—Board, heat, light and room, $30.00 per quarter.

Day Students.—Room, heat and tuition, $12.50 per quarter.

Short Winter Course Students.—Board, heat, light and room, for the course, $40.00.

Students entering College after November 1st, or leaving the same prior to the close of the scholastic year, will be charged for the time they are here, as follows, viz:

Boarding students at the rate of $30.00 per month.

Scholarship students at the rate of $15.00 per month.

Day students at the rate of $6.00 per month.

Students withdrawing after entrance, must pay the charge for at least one month's attendance.

Table board for students not rooming at the College will be $14.00 per month, or 25 cents per meal.

TIME OF PAYMENT.

For Boarding Students, $60.00 on entrance, $60.00 November 15th, $60.00 February 1st, $60.00 April 1st.

For Scholarship Students, $30.00 on entrance, $30.00 November 15th, $30.00 February 1st, $30.00 April 1st.

For Day Students, $12.50 on entrance, $12.50 November 15th, $12.50 February 1st, $12.50 April 1st.

Promptness of payment is essential, and must be made in advance, by order of the Board of Trustees.

FEES.

No fees of any character will be charged by the College.

Students will be admitted free of cost to membership in the College Athletic Association.

Damage to College property by students will be promptly reported to parents or guardians and prompt payment expected.

All College property in the possession of the individual student, such as his room, furniture, books, apparatus and military equipment, will be charged against him, and the parent or guardian must assume responsibility for its return without abuse, to the proper department at the end of each scholastic year, at which time the account will be cancelled. If abused, the cost of replacing or repairing the abused article, must be paid by the parent or guardian.

Damage to College property in public places in the building and on the grounds by the students will be charged to the whole student body, pro rata, unless the offender is known. In such cases, the whole expense of repairing or replacing the damaged property will be charged to the parent or guardian of the offending party. The matriculation of a student is evidence of the acceptance of this regulation.

Coaching for backward students will be provided by the President upon application.

UNIFORM.*

Dress Uniform (coat, trousers and cap)	$15.60
Khaki Uniform (coat, trousers, hat and leggins)	5.50
Shirt and belt	1.25

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.

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*Price quoted on basis of last year's contract.

1 pair blankets (for single bed).
2 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (uniform).

The room-mates together purchase the following articles:

2 table cloths (uniform).
2 clothes bags (uniform).
1 broom.

All the articles marked (uniform) in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any unexpended balance will be returned promptly.

STUDENT ORGANIZATIONS.

Students clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and college pride and developing an *esprit de corps* among the students. Each class has its own organization, in which matters relating to the class are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline and tends to raise the standard of student honor.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

President, R. Brigham.
Vice-President, W. C. Reeder.
Secretary, J. P. Shamberger.
Treasurer, N. L. Warren.

Much encouraging work has been done by this organization during the past year, and much interest has been shown in the meetings.

LITERARY SOCIETIES.

These societies are invaluable adjuncts to college work. Through them a good knowledge of parliamentary law is gained, as well as a readiness of expression and activity in thought, qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Professor of Oratory, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

NEW MERCER SOCIETY.

President, U. W. Long.
Vice-President, S. M. Lowrey.
Secretary-Treasurer, J. W. Firor.
Sergeant-at-Arms, G. C. Day.

MORRILL SOCIETY.

President, R. Brigham.
Vice-President, N. L. Warren.
Secretary-Treasurer, H. B. Hoshall.

ROSSBURG CLUB.

The social man is a necessity—hence this organization is encouraged and supported by the President and Faculty. The entertainments have been marked by a spirit which emphasizes the wisdom of its continuance and justifies its encouragement.

President, C. W. Sylvester.
Vice-President, T. B. Mackall.
Secretary, U. W. Long.
Treasurer, W. A. S. Somerville.

"REVEILLE."

The "Reveille" is the College annual, edited entirely by the Senior class. Eleven editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard both of originality and expression.

EDITORIAL STAFF, 1908.

Editor-in-Chief, R. Brigham.
Associate Editors, W. H. Thomas, J. P. Shamberger, G. C. Day.
Business Manager, N. L. Warren.
Associate Business Managers, T. B. Mackall, L. B. Broughton, S. W. Lowrey.
Treasurer, W. A. S. Somerville.

DEPARTMENT EDITORS.

Athletic, U. W. Long.
Humorous, W. C. Reeder.
Social, J. W. Firor.
Class History, J. P. Shamberger.

THE ORATORICAL ASSOCIATION OF MARYLAND COLLEGES.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges in rotation, and a marked improvement is to be observed as a result of its organization.

THE ALUMNI ASSOCIATION.

"The Alumni Association is steadily growing in two ways; that is to say, recent graduates almost invariably become active members, and the graduates of the earlier days of the College are becoming more active and more interested in all that pertains to the welfare of their Alma Mater.

The semi-centennial celebration, which occurred March 6, 1906, had for one of its results the bringing together of a larger gathering of the Alumni than on any previous occasion, and this re-union is probably the forerunner of larger Alumni gatherings in the future.

The association has continued the offer of three medals for worthy students in the several collegiate departments, and there is no doubt regarding the wisdom of stimulating in this way the energies of the students. The enrollment of the Alumni Association is now reaching a point where some definite accomplishment can be effected, and each individual should be ready to suggest a desirable project, at the same time to assist in the execution of that object which is most feasible and popular with the Association at large.

The entire institution as viewed from the Alumni standpoint is worthy of the confidence of its patrons and the public. Each of us should feel that every step in advance of that achieved in our day, should give us a feeling of pride, that it is in a manner the result of the successful completion of the work then offered, and should bind us more closely to the work of the present and the broadening of its future.

The officers for the year are: President, W. S. Keech, '93; Vice-President, Grenville Lewis, '97; Secretary-Treasurer, Guy W. Firor, '07; Executive Committee, members at large, Ed. Hall, '66, F. W. Besley, '92.

Graduates and members of the association are requested to keep the Secretary-Treasurer, Guy W. Firor, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates which will enable the officers to locate and communicate with them will facilitate their efforts and will tend to further the success of the Association.

CANDIDATES FOR DEGREES TO BE CONFERRED IN 1908, WITH SUBJECTS OF THESES.

BACHELOR OF SCIENCE IN AGRICULTURE.

REUBEN BRIGHAM, BRINKLOW, MD.
"The Profitable Production of Winter Lambs in Maryland."

WALTER CAMERON REEDER, RISING SUN, MD.
"Study of the Effects of Feeds Upon the Solidity and Melting Point of the Fats in Butter."

ROBERT HENRY RUFFNER, OPAL, VA.
"Some Investigation of the Milk Supply of Washington City."

BACHELOR OF SCIENCE IN CHEMISTRY.

LEVIN BOWLAND BROUGHTON, POCOMOKE CITY, MD.
"Analysis of Commercial Peppers."
ELWOOD MCAFEE PARADIS, STOCKTON, MD.
"Analysis of Commercial Ammonias."

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

HARRY CLIFTON BYRD, CRISFIELD, MD.
GROVER CLEVELAND DAY, DUBLIN, MD.
SAMUEL MACLEROY LOWREY, COLGATE, MD.
EUGENE HERMAN PLUMACHER, JR., MARACAIBO, VENEZUELA.
MICHAEL CARMEN PLUMACHER, MARACAIBO, VENEZULA.
NATHANIEL LUFF WARREN, JR., SELBYVILLE, DEL.
"Location of a Highway from Lakeland to the Maryland Agricultural College."
CAESAR SOLARI REVOREDO, LIMA, PERU.
"The Design of a 96-Foot Span Steel Highway Bridge."
CARROLL AMBROSE WARTHEN, KENSINGTON, MD.
ROGER AUSTIN WILSON, CUMBERLAND, MD.
"Design for 75-Foot Span, Warren Girder Highway Bridge."

BACHELOR OF SCIENCE.

URAH WILLIS LONG, SELBYVILLE, DEL.
"The Economic Importance of the Order Hemiptera."

FRANK ERNEST RUMIG, COLLEGE PARK, MD.
"Studies of Plant Disease Resistance."

BACHELOR OF SCIENCE IN HORTICULTURE.

GEORGE GROVER BECKER, BALTIMORE, MD.
"The Effect of the Specific Gravity and Size of the Seed Upon the Resulting Plant."

BARNEY REYBOLD COOPER, KENNEDYVILLE, MD.
"Raising Early Cabbage and Cauliflower—Fall-Grown Plants Compared with Spring Grown."

JOHN WILLIAM FIROR, THURMONT, MD.
"Cross Pollination and Its Effects Upon the Variability of Fruits."

THOMAS BOURNE TURNER MACKALL, MACKALL, MD.
"The Effect of Commercial Fertilizers on Lettuce."

EDWARD INGRAM OSWALD, COLLEGE PARK, MD.
"The Effect of Manure Upon the Vitality of Weed Seeds, Under Barnyard Conditions."

RICHARD LEE SILVESTER, COLLEGE PARK, MD.
"The Effect of Potash Salts on Onions."

WALTER HENRY THOMAS, CROSS ROADS, MD.
"The Propagation of the Apple by Means of Cuttings."

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING.

NORMAN EARLE BRICE, ANNAPOLIS, MD.
WILLIAM ANDERSON SHIPMAN SOMERVILLE, CUMBERLAND, MD.
"Design of a One Hundred and Fifty Horsepower Return Tubular Boiler."

HARRY BENTON HOSHALL, PARKTON, MD.
JOHN PAUL LYSIAS SHAMBERGER, PARKTON, MD.
"The Designing of a Simple, Reciprocating Vertical Engine."

HARRY WILCOX STINSON, COLUMBIA, MD.
"The Design, Construction, Installation, Care and Operation of a 187.5 I. M. P. Heavy Duty, Self-Contained Stationary Engine."

CHARLES WESLEY SYLVESTER, DENTON, MD.
"Plans for a Modern Machine Shop."

MEDALS AWARDED IN 1907.

JOHN POSEY MUDD.

Senior Medal: for highest standing for the entire course; offered by the President. Average 92.5.

MORRIS HENRY ADAMS AND WILLIAM TERRY MAHONEY.

Honorary mention, average over 90.

J. P. SHAMBERGER.

Junior Medal: for highest standing in Junior Year; offered by the President. Average 97.4.

HARRY WOOD LIPPENCOTT.

*Gold Medal for best debater in commencement competition; offered by the Alumni Association.

STANLEY TORNEY VOCKE.

*Gold Medal for best Thesis on Agricultural Science; offered by the Alumni Association.

CHARLES HAMILTON HARPER.

*Gold Medal for best work in Mechanical Engineering Department; offered by the Alumni Association.

JOHN POSEY MUDD.

Honorable mention.

REUBEN BRIGHAM.

Gold Medal for the best essay on "American Citizenship;" offered by the Board of Trustees.

HARRY WOOD LIPPENCOTT.

Schley Prize for best oration, treating Maryland History, delivered on Maryland Day, 1907; founded by Hon. B. H. Warner.

JAMES STANLEY GORSUCH.

William Pinkney Whyte Gold Medal; founded by Hon. Isaac Lobe Straus; for excellence in oratory.

MILITARY ROSTER—CADET BATTALION.

EDWARD LLOYD, MAJOR, U. S. A.

COMMANDANT OF CADETS.

FIELD AND STAFF.

Major B. R. Cooper.
First Lieutenant and Adjutant, R. L. Silvester.
Second Lieutenant and Quartermaster, Reuben Brigham.

NON-COMMISSIONED STAFF.

Sergeant-Major, C. F. Mayer.
Quartermaster-Sergeant, L. O. Jarrell.
Color Sergeant, P. E. Dupuy.

COMPANY A.

U. W. Long, Captain.

W. C. Reeder, First Lieutenant. J. W. Firor, Second Lieutenant.
H. C. Byrd, H. W. Stinson, Additional Third Lieutenants.
A. C. Turner, First Sergeant. J. Q. A. Holloway, Second Sergeant.
J. S. Gorsuch, Third Sergeant. W. R. Maslin, Fourth Sergeant.
H. M. Coster, Fifth Sergeant.
F. J. Maxwell, First Corporal. M. E. Tydings, Second Corporal.
J. P. Grason, Third Corporal. H. M. Walters, Fourth Corporal.

COMPANY B.

J. P. Shamberger, Captain.

W. A. S. Somerville, First Lieutenant. N. L. Warren, Second Lieutenant.
G. G. Becker, Third Lieutenant.
N. E. Brice, E. M. Paradis, Additional Third Liteutenants.
P. E. Burroughs, First Sergeant. G. E. Hamilton, Second Sergeant.
T. D. Jarrell, Third Sergeant. L. J. Hathaway, Fourth Sergeant.
B. D. Spalding, Fifth Sergeant.
H. S. Cobey, First Corporal. H. C. Evans, Second Corporal.
L. G. True, Third Corporal.

COMPANY C.

C. W. Sylvester, Captain.

H. B. Hoshall, First Lieutenant.
S. L. Lowrey, Second Lieutenant.
R. A. Wilson, M. Plumacher, Additional Third Lieutenants.
J. F. Allison, First Sergeant.
M. E. Choate, Third Sergeant.
F. H. Dryden, Second Sergeant.
C. W. Sigler, Fourth Sergeant.
J. E. Haslup, Fifth Sergeant.
T. R. Stanton, First Corporal.
W. J. Frere, Second Corporal.
E. H. Price, Third Corporal.
E. H. Bounds, Fourth Corporal.

ROSTER OF MATRICULATES.

SESSION 1907-1908.

GRADUATE STUDENTS.

NAME.	POST OFFICE.	COUNTY.
Firor, G. W.	College Park	Prince George
Walls, E. P.	Barclay	Queen Anne

SENIOR CLASS.

Becker, G. G.	Baltimore	*Baltimore City*
Brice, N. E.	Annapolis	Anne Arundel
Brigham, R.	Brinklow	Montgomery
Broughton, L. B.	Pocomoke City	Worcester
Byrd, H. C.	Crisfield	Somerset
Cooper, B. R.	Worton	Kent
Day, G. C.	Dublin	Harford
Firor J. W.	Thurmont	Frederick
Hoshall, H. B.	Parkton	Baltimore
Long U. W.	Selbyville	*Delaware*
Lowrey, S. L.	Colgate	Baltimore
Mackall, T. B.	Mackall	Calvert
Paradis, E. M.	Stockton	Worcester
Plumacher, E. H.	Maracaibo	*Venezuela*
Plumacher, M. C.	Maracaibo	*Venezuela*
Reeder, W. C.	Rising Sun	Cecil
Rumig, F. E.	College Park	Prince George
Shamberger, J. P.	Parkton	Baltimore
Silvester, R. L.	College Park	Prince George
Solari, C. S.	Lima	*Peru*
Somerville, W. A. S.	Cumberland	Allegany
Stinson, H. W.	Columbia	Howard
Sylvester, C. W.	Denton	Caroline
Thomas, W. H.	Cross Roads	Charles
Warren, N. L.	Selbyville	*Delaware*
Warthen, C. A.	Kensington	Montgomery
Wilson, R. A.	Cumberland	Allegany

JUNIOR CLASS.

Allison, J. M. F.	Washington	*District of Columbia*
Boyle, W.	Washington	*District of Columbia*
Burroughs, P. E.	Croome	Prince George
Cory, E. N.	Takoma Park	*District of Columbia*
Coster, H. M.	Solomons	Calvert
Dryden, F. H. Jr.	Pocomoke City	Worcester
Dupuy P. E.	Pasamaya	*Peru*
Gilbert, L. E.	Laurel	Prince George
Gorsuch, J. S.	Fork	Baltimore

NAME.	POST OFFICE.	COUNTY.
Griffin, J. P.	Highland	Howard
Haslup, J. E.	Savage	Howard
Hathaway, L. J.	Easton	Talbot
Holloway, J. Q. A.	Rosaryville	Prince George
Janer, F.	Baltimore	*Baltimore City*
Jarrell, L. O.	Greensboro	Caroline
Jarrell, T. D.	Greensboro	Caroline
Koenig, M. Jr.	Baltimore	*Baltimore City*
McEnany R.	Clear Spring	Washington
Maslin, W. R.	Port Chester	*New York*
Mayer, C. F.	Frostburg	Allegany
Spaulding, B. D.	Churchville	Harford
Tauszky, C. E.	Baltimore	*Baltimore City*
Turner, A. C.	Sollers	Calvert

SOPHOMORE CLASS.

Adams, C.	Takoma Park	*District of Columbia*
Allen, H. H.	Towson	Baltimore
Andrews, O. R.	Hurlock	Dorchester
Barrows, P. R.	Berwyn	Prince George
Bauer, J. W.	Havre de Grace	Harford
Berry R. B.	Laurel	Prince George
Bounds, E. H.	Mardella Springs	Wicomico
Breeden A. C.	Sollers	Calvert
Carpinter, R. H.	Washington	*District of Columbia*
Cobey, H. S.	Grayton	Charles
Cole, W. P. Jr.	Towson	Baltimore
Crapster, J. O.	Taneytown	Carroll
Doak, H. D.	Darby	*Pennsylvania*
Donaldson, J. L.	Berwyn	Prince George
Drach, C. R.	New Windsor	Carroll
Duckett, J. W.	Davidsonville	Anne Arundel
Evans H. C.	Lonaconing	Allegany
Frere, W. J.	Tompkinsville	Charles
Gorsuch, V. L.	Mt. Carmel	Baltimore
Grason, J. P.	Towson	Baltimore
Gray, S. L.	Nanjemoy	Charles
Hamilton, G. E.	La Plata	Charles
Harding, T. S.	Laurel	Prince George
Hicks, C. G.	Cambridge	Dorchester
Hoge, J. H.	Baltimore	*Baltimore City*
Kefauver, J. O.	Middletown	Frederick
Martinez, S.	Salvador	*Honduras*
Maxwell F. J.	Comus	Montgomery
Munson, W. C. D.	South Britain	*Connecticut*
Osbourne, W. E.	Baltimore	*Baltimore City*
Price, E. H.	Washington	*District of Columbia*
Roberts, M.	Washington	*District of Columbia*
Roe, L. M.	Wye Mills	Talbot
Saunders, W. S.	Baltimore	*Baltimore City*
Stabler, S. S.	Brighton	Montgomery
Stanton, T. R.	Grantsville	Garrett
Steffens, H. L.	Baltimore	*Baltimore City*

NAME.	POST OFFICE.	COUNTY.
STRICKLAND, C. W.	Snow Hill	Worcester
TIMANUS, W. O.	Laurel	Prince George
TRUE, L. G.	Washington	*District of Columbia*
TYDINGS, M. E.	Havre de Grace	Harford
VALUE, B. R.	Pocomoke City	Worcester
WALTERS, H. M.	Pocomoke City	Worcester
WARD, F. R.	Baltimore	*Baltimore City*
WENNER, C. F.	Brunswick	Frederick
WHITE, H. J.	College Park	Prince George
WHITE, J. R.	Poolesville	Montgomery
WHITING, W. W.	Hyattsville	Prince George
WOOLFORD, M. H.	Cambridge	Dorchester

FRESHMAN CLASS.

AIKENHEAD, W. M.	Easton	Talbot
AMAN L. J.	Hyattsville	Prince George
BENSON, J. B.	Buffalo	*New York*
BOSS, E. C.	Washington	*District of Columbia*
BRADSHAW, H. J.	Deal's Island	Somerset
BRASURE, G. C.	Selbyville	*Delaware*
BROOKS, T. R.	Hyattsville	Prince George
BURNS, J. M.	Morgantown	*West Virginia*
BYERS, J. E. T.	Laurel	Prince George
CHURCH, C. B.	Washington	*District of Columbia*
CLARK, N. L.	Laurel	Prince George
DALEY, J.	Baltimore	*Baltimore City*
DAVIDSON T.	Davidsonville	Anne Arundel
DEVILBISS, H. R.	New Windsor	Carroll
DUCKETT, A. B.	Hyattsville	Prince George
FIELDS, J. F.	Hancock	Washington
GAREY, D.	Denton	Caroline
GLASS, D. W.	Baltimore	*Baltimore City*
HOEN, S.	Richmond	*Virginia*
JOVA, J.	Washington	*District of Columbia*
JUMP, W. G.	Chestertown	Kent
KINGHORNE, J. W.	Baltimore	*Baltimore City*
LANKFORD, G. A.	Salisbury	Wicomico
LITTLE P. R.	Funkstown	Washington
LUNN, C. B.	Baltimore	*Baltimore City*
MANGUM, H.	Baltimore	*Baltimore City*
MORLEY, S. C.	Hyattsvile	Prince George
MUDD, E. A.	Cheltenham	Prince George
NEWCOMER, E.	Benevola	Washington
NYDEGGER, W. E.	Elkins	*West Virginia*
OIESEN, E. E.	Baltimore	*Baltimore City*
PADGETT, W. J.	Baltimore	*Baltimore City*
QUIMBY, G. P.	Cordova	Talbot
REDMOND, B. J.	Charleston	*West Virginia*
SEVERE, W. E.	Riverdale	Prince George
SHIPLEY, W. L.	Berwyn	Prince George
SILVESTER, L. M.	Portsmouth	*Virginia*
SIMPSON, R. L.	Dayton	Howard
SMITH, W. C.	Baltimore	*Baltimore City*
SONNENBERG, A. T.	Bladensburg	Prince George

NAME.	POST OFFICE.	COUNTY.
Staley, L.	Washington	*District of Columbia*
Stifler, J. R.	Belair	Harford
Thomas, R. D.	Pomonkey	Charles
Thomson, H. C.	Hyattsville	Prince George
Timanus, B. R.	Laurel	Prince George
Tolson R. L.	Colesville	Montgomery
Towers. I. L.	Chevy Chase	Montgomery
Trimble, V.	Mt. Savage	Allegany
Twaddell, C. E.	Philadelphia	*Pennsylvania*
Walters, W. H.	Pocomoke City	Worcester
White, F. M.	Dickerson	Montgomery
White, W. H.	College Park	Prince George

SECOND-YEAR AGRICULTURAL.

Choate, M. E.	Randallstown	Baltimore
Golden, C. J.	Swanton	Garrett
Sigler, C. W.	Ridgely	Caroline
Smith, I. A.	Ashton	Montgomery

FIRST-YEAR AGRICULTURAL.

Caraza, C. M.	San Jose	*Costa Rica*
Hoen, R.	Richmond	*Virginia*
Langdon, H. B.	Charlestown	*West Virginia*
Malcolm, D.	Washington	*District of Columbia*
San Romano, C.	Lima	*Peru*

PREPARATORY CLASS.

Bell, G. M.	Berlin	Worcester
Boeckner, E. S.	Baltimore	*Baltimore City*
Calhoun, R. C.	McKeesport	*Pennsylvania*
Dennis, S. C.	Ocean City	Worcester
Emrich, P. L.	Washington	*District of Columbia*
Evans, B. H.	Lonaconing	Allegany
Johnson, C. W.	Baltimore	*Baltimore City*
Kelly, O.	Baltimore	*Baltimore City*
Klingler, G. P.	Washington	*District of Columbia*
Long, N.	California	St. Mary
Lyon, T. A.	Hyattsville	Prince George
Morris, J. C.	Riverdale	Prince George
Nydegger, W. E.	Elkins	*West Virginia*
Oliver, S.	Brookline	*Massachusetts*
O'Neill, H. H.	Bladensburg	Prince George
Posey, G. B.	Riverside	Charles
Robinson, S. L.	Cumberland	Allegany
Roth, I. H.	McKeesport	*Pennsylvania*
Scheewe, W. R.	Baltimore	*Baltimore City*
Seibold, G. C.	Baltimore	*Baltimore City*
Shema, E.	Highlandtown	Baltimore
Shipley, S. G.	Baltimore	*Baltimore City*
Smith, R. R.	Wakefield	Carroll
Sonnenberg, H.	Bladensburg	Prince George
Spangler, G. M.	Washington	*District of Columbia*

NAME.	POST OFFICE.	COUNTY.
Stanton, A. C.	Grantsville	Garrett
Thompson, S.	Washington	*District of Columbia*
Twigg, H. L.	Twiggtown	Allegany
Walter R.	Buffalo	*New York*
Wilburn, R.	Baltimore	*Baltimore City*
Willis, H. D.	Hyattsville	Prince George

SPECIAL STUDENTS—JUNIOR AND SENIOR WORK.

Oswald, E. I.	Chewsville	Washington
Ruffner, R. H.	Opal	*Virginia*

SPECIAL STUDENTS TAKING PARTIAL COURSE.

Lowe, R. L.	Baltimore	*Baltimore City*

SPECIAL STUDENTS TAKING ELEMENTARY WORK.

Arrango, A. A.	Camagney	*Cuba*
Boza, J.	Ica	*Peru*
Boza, O.	Ica	*Peru*
Castro, P. L.	Caborojo	*Porto Rico*
Marmol, A.	Ica	*Peru*
Marmol, F.	Ica	*Peru*
Olivares, D.	Maracaibo	*Venezuela*
Saavedra, J.	Pocosmaya	*Peru*
Servano, M.	Cucuta	*Columbia*
Tanguis, L.	Ica	*Peru*

TEN-WEEKS WINTER COURSE.

Baker, C. H.	Mt. Lake Park	Garrett
Coffman, J. D.	Lydia	Washington
Collier, C. S.	Easton	Talbot
Dalton, J. C.	White Hall	Baltimore
Dickard, J. C.	Baltimore	*Baltimore City*
Ellis, W. A.	Laurel	Prince George
Jacobs, A. W.	Havre de Grace	Harford

INSPECTOR'S CLASS.

Beeghly, A. O.	Keyser	Garrett
Barnum, E. G.	Girdletree	Worcester
Brown, C. C.	Chestertown	Kent
Carroll, W. C.	College Park	Prince George
Carpenter, C. M.	Riverdale	Prince George
Davis, F.	Street	Harford
English, J. D.	Frederick	Frederick
Graham, H. W.	Tyaskin	Wicomico
Griffin, S.	Denton	Caroline
Hardt, J. T.	Elioak	Howard
Herr, R. E.	Boonsboro	Washington
Huss, F.	Ammondale	Prince George
Klein, C. E.	Frederick	Frederick
Krumbine, H. S.	Gilpen	Allegany

NAME.	POST OFFICE.	COUNTY.
MacMillan, A. M.	Riverdale	Prince George
Marlow, R. E.	Muirkirk	Prince George
Murdock, W. A.	Hagerstown	Washington
Pry, T. J.	Keedysville	Washington
Swisher, C.	Cumberland	Allegany
Walker, W. I.	Chestertown	Kent
Walsh, J.	Westminster	Carroll
Warthen, G. F.	Loveville	St. Mary
Wilkins, A.	Rehobeth	Somerset
Woodward, C. H.	Hyattsville	Prince George
Yingling, F. G.	Reisterstown	Baltimore

SUMMARY OF STUDENTS.

Graduate Students	4
Senior Class	27
Junior Class	23
Sophomore Class	49
Freshman Class	52
Second Year Agricultural	4
First Year Agricultural	5
Preparatory Students	31
Ten-week Course	7
Special Students	13
Inspectors' Class	25
Total	240

LIST OF PRESIDENTS AT THE MARYLAND AGRICULTURAL COLLEGE.

1.	Prof. Benjamin Hallowell,	President of the Faculty	..1859—1860
2.	Rev. J. W. Scott	" " " "	..1860—1860
3.	Prof. Colby	" " " "	..1860—1861
4.	Prof. Henry Onderdonk	" " " "	..1861—1864
5.	Prof. N. B. Worthington	" " " "	..1864—1867
6.	Prof. C. L. C. Minor	President of College	..1867—1868
7.	Admiral Franklin Buchanan	" " " "	..1868—1869
8.	Prof. Samuel Regester	" " " "	..1869—1873
9.	Gen. Samuel Jones	" " " "	..1873—1875
10.	Capt. W. H. Parker	" " " "	..1875—1883
11.	Gen. Augustus Smith	" " " "	..1883—1887
12.	Allen Dodge, Esq., Pro Tem.	" " " "	..1887—1888
13.	Major Henry E. Alvord	" " " "	..1888—1892
14.	R. W. Silvester, LL. D.	" " " "	..1892———

LIST OF GRADUATES WITH DEGREES AND ADDRESSES.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

CLASS OF '62.

*Franklin, J., B. S.
Sands, W. B., A. B., Lake Roland, Md.

CLASS OF '63.

*Calvert, C. B., A. B.

CLASS OF '64.

Hall, D., A. M.
Todd, W. B., B. S.

CLASS OF '66.

Hall, E., A. B., Millersville, Md.
*Roberts, L., Ph. B.
Waters, F., A. B., West River, Md.

CLASS OF '71.

Soper, F. A., A. B. (M. A. '74), Baltimore, Md.

CLASS OF '73.

*Henry, R. S., A. B. (M. A. '75).
Miller, O., A. B. (M. A. '75).
Regester, A., A. B.
Worthington, D., A. B.
Worthington, W., A. B.

CLASS OF '74.

Coffren, J. H., B. S. (M. A. '77).
Davis, H. M., A. B. (M. A. '77), Poolesville, Md.
Griffith, L. A., A. B. (M. A. '77), Upper Marlboro, Md.
Norwood, F. C., A. B. (M. A. '77), Frederick, Md.

CLASS OF '75.

Gray, J. B., A. B. (M. A. '78), Prince Frederick, Md.
Hyde, J. F. B., A. B., 1803 Bolton Street, Baltimore, Md.
Lerch, C. E., B. S., 110-114 Hanover Street, Baltimore, Md.
Miller, L., B. S., El Paso, Texas.

---

*Deceased.

CLASS OF '76.

Blair, W. J., B. S. (M. S., '79), Custom House, Baltimore, Md.
Thomas, T. H., B. S., Maddox, Md.
*Worthington, J. L., B. S.

CLASS OF '77.

*Beall, R. R., B. S.
Emack, E. G., B. S., District Building, Washington, D. C.
*Thomas, G., B. S.
Truxton, S., B. S.

CLASS OF '78.

Thomas, W., B. S.

CLASS OF '80.

Gale, H. E., A. B., 260 W. Hoffman St., Baltimore, Md.

CLASS OF '81.

Houston, T. T., A. B.
Mercer, R. S., A. B.
Porter, W. R., A. B.
Rapley, R. R., B. S.
Thomas, W. H., A. B., Westminster, Md.
Wood, C. W., A. B.

CLASS OF '82.

Bowen, P. A., Jr., A. B., 1413 G St., N. W., Washington, D. C.
Freeland, H., A. B., Mutual, Calvert Co., Md.
Saunders, C. A., A. B.
Stonestreet, J. H., A. B., Barnesville, Md.
Wenner, C., A. B.

CLASS OF '83.

Chew, R. B. B., A. B., 512 F St., N. W., Washington, D. C.
Kirby, W. A., A. B., Trappe, Md.
Lakin, W. A., A. B.
Rapley, E. E., A. B., 628 Louisiana Ave., Washington, D. C.

CLASS OF '84.

Martin, F., B. S.
Lakin, W. T., A. B., Cumberland, Md.

CLASS OF '88.

Chambliss, S. M., A. B., News Building, Chattanooga, Tenn.
Hazen, M. C., B. S., City Hall, Washington, D. C.
Johnson, L. B., A. B., Morganza, Md.

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*Deceased.

*Sigler, W. A., B. S.
Smith, R. E., B. S., Ridgely, Md.
Tolson, A. C., A. B., Gunther Building, Baltimore, Md.
Weems, J. B., B. S.

CLASS OF '89.

Griffith, T. D., B. S., Redland, Md.
Lewis, G., B. S., Whitehead, Tenn.
Pindell. R. M., B. S., Civil Service Commission, Washington, D. C.
*Saulsbury, N. R., B. S.
Witmer, F., B. S., Hagerstown, Md.

CLASS OF '90.

Calvert, R. C. M., B. S., Bangalore, India.
Keech, W. S., B. S., Towson, Md.
Manning, C. C., B. S., 16 Avon Street, Portland, Me.
*Niles, E. G., B. S.
Russell, R. L., B. S., Anadarko, Okla.
Soles, C. E., B. S., McKeesport, Pa.

CLASS OF '91.

*Branch, C., B. S.
*Langley, J. C., B. S.
Latimer, J. B., B. S., Broome's Island, Md.
*Penn, S., B. S.
Veitch, F. P., B. S., Agricultural Department, Washington, D. C.

CLASS OF '92.

Besley, F. W., A. B., State Bureau of Forestry, J. H. U., Baltimore, Md.
Brooks, J. D., A. B., Medical Department, U. S. A.
Calvert, G. H., A. B., College Park, Md.
Chew, F., B. S.
Childs, N., B. S., Millersville, Md.
Gambrill, S. W., B. S., Fidelity and Deposit Co., London, England.
Johnson, E. D., A. B., West Pittston, Pa.
Ray, J. E., A. B., 416 Fifth St., Washington, D. C.

CLASS OF '93.

Alvey, C., B. S., Hagerstown, Md.
Buckley, S. S., B. S., College Park, Md.
Graff, G. Y., B. S., 3323 Fourteenth Street, N. E., Washington, D. C.
Holzapfel, H. H., Jr., B. S., Hagerstown, Md.
Lawson, J. W., B. S., Southern Railway, Washington, D. C.
Sherman, H. C., B. S., Columbia University, New York, N. Y.

CLASS OF '94.

Best, H., B. S., Birdsville, Md.
Bomberger, F. B., B. S. (M. A. '02), College Park, Md.
Brown, A. S., B. S., Washington, D. C.

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*Deceased.

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